

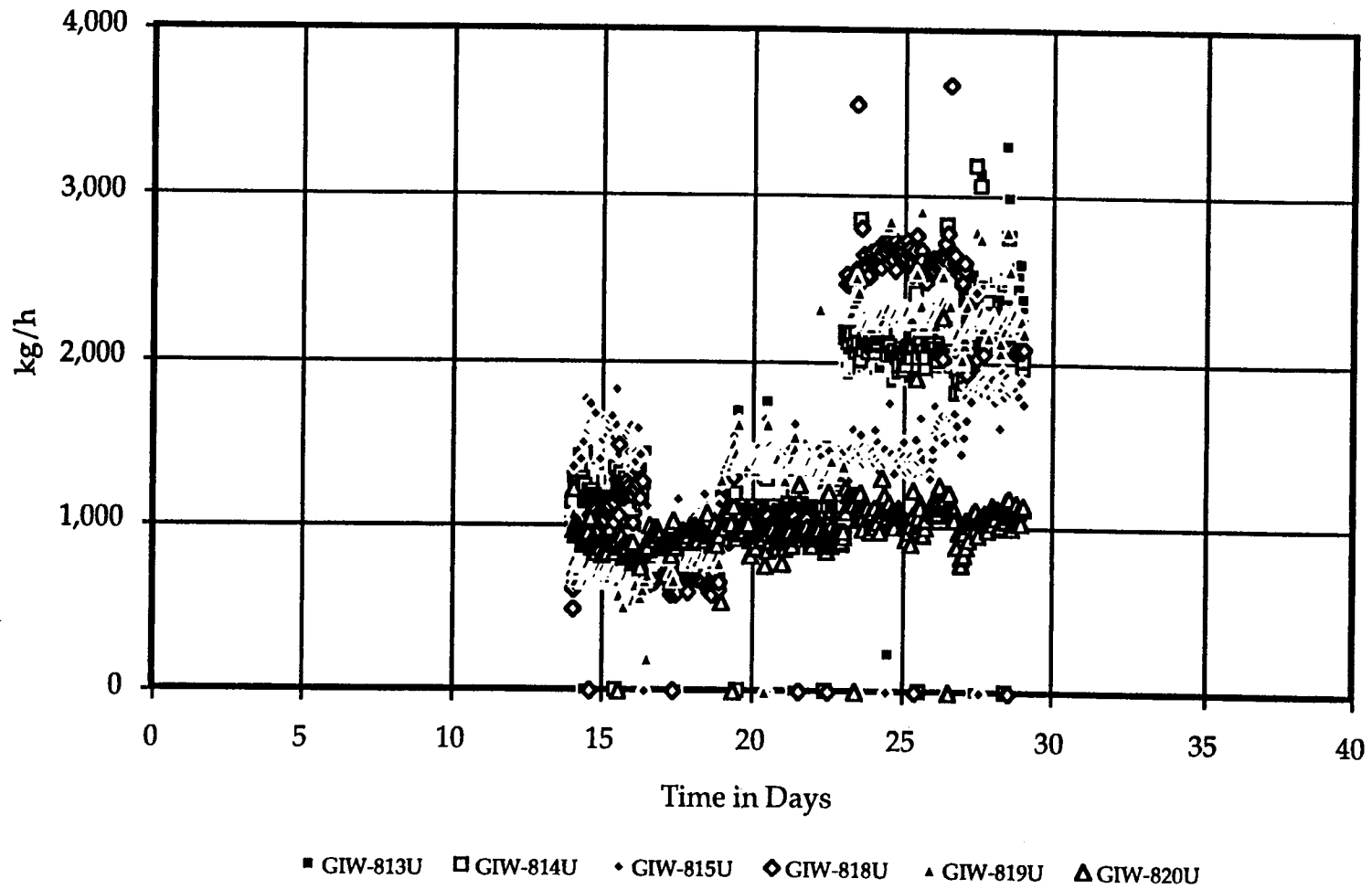
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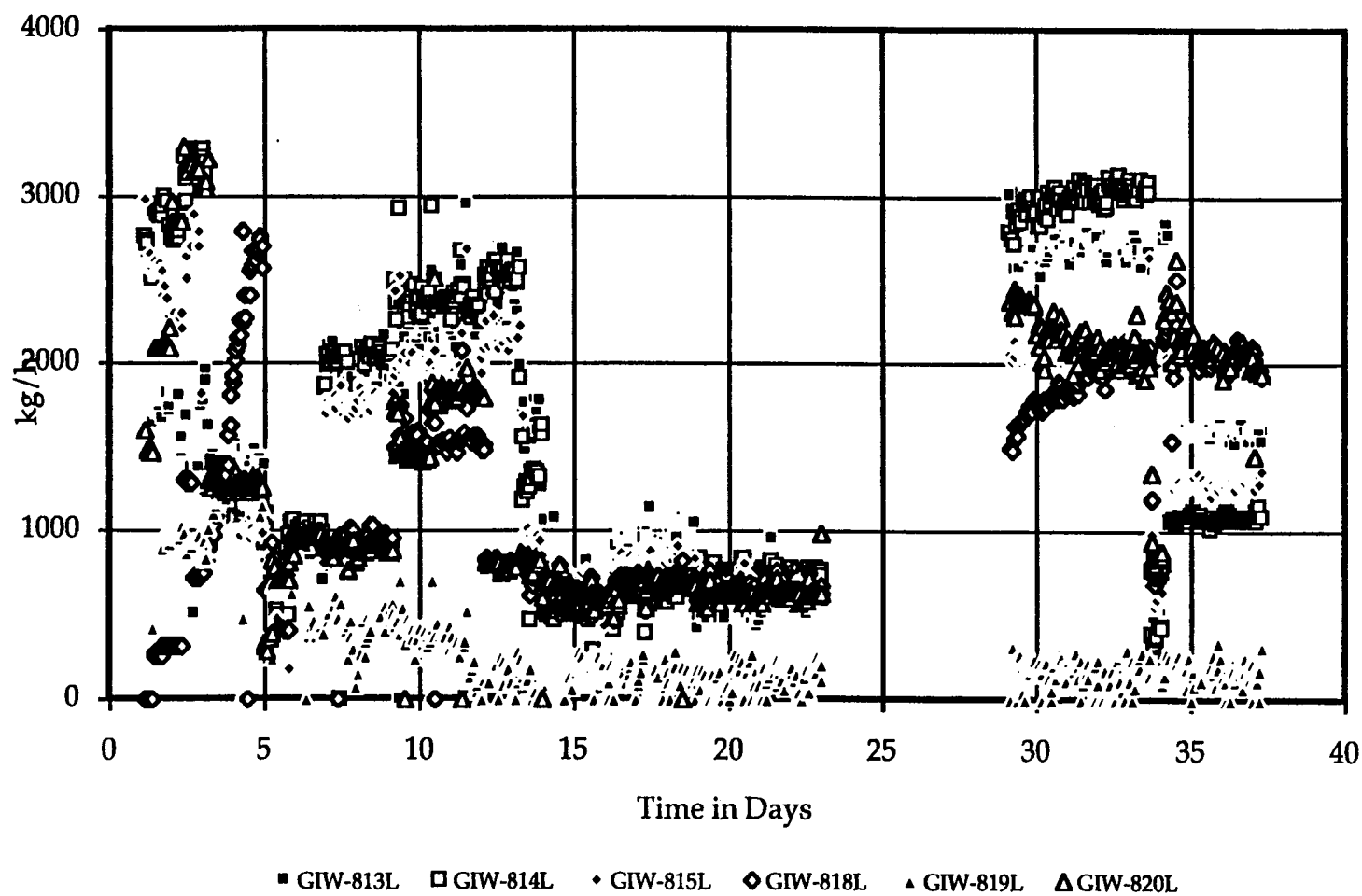
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The following are plots of steam injection data during the first pass for each individual injection wellhead. Steam was injected for a total of 37 days beginning on February 4, 1993 and ending on March 12, 1993. During the first pass, the boiler was operated continuously, running 24 hours per day for the 37 days. Steam was injected continuously into either the upper screened interval, the lower screened interval or both. Injection rates into individual wells varied depending upon the need to control the movement of steam into specific areas. The decision to vary injection rates was based upon real time data such as temperature profiles and Electrical Resistance Tomography (ERT) images.

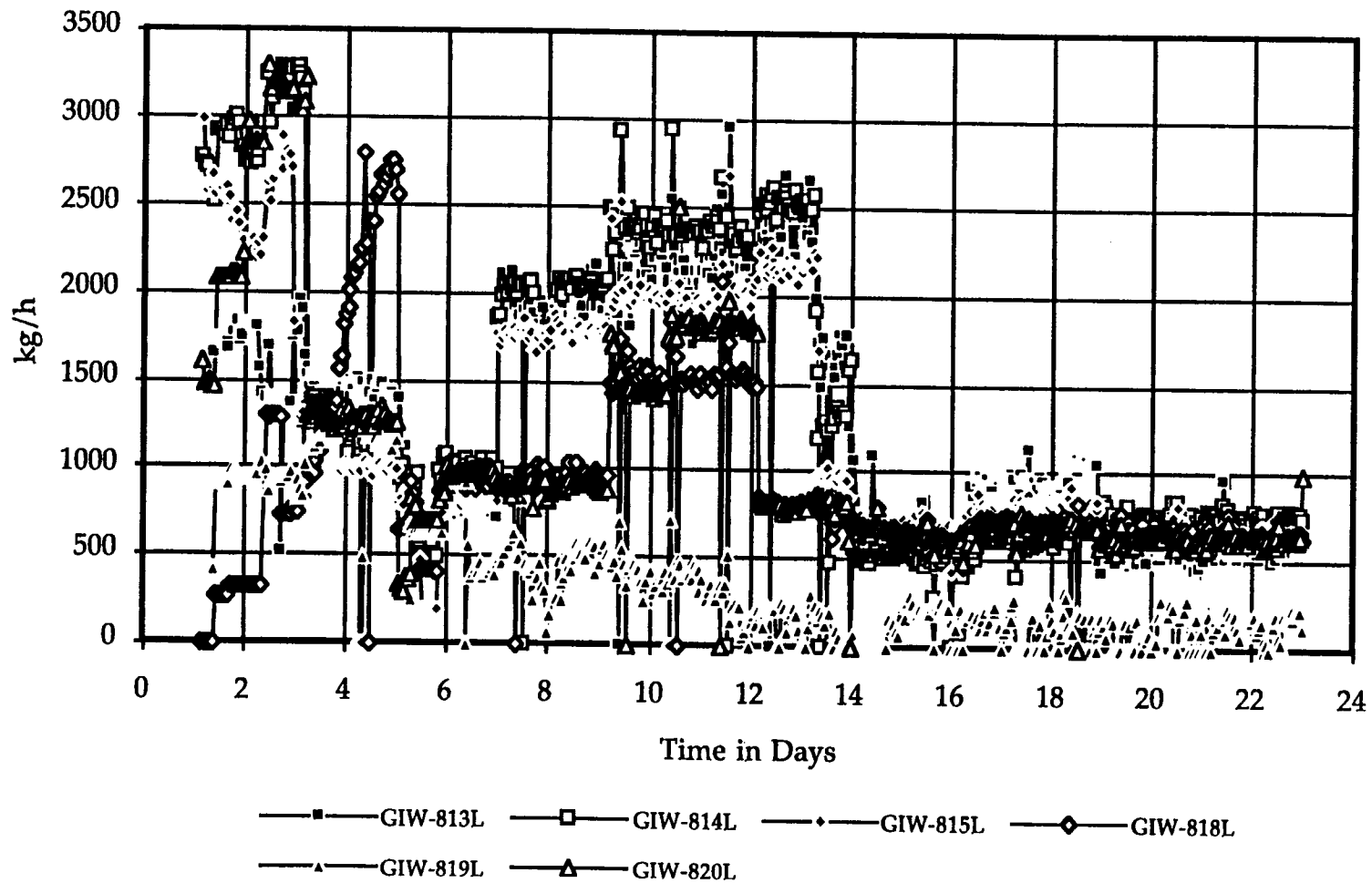
Dynamic Underground Stripping Project
Steam injection rates into the upper screened intervals
during the first steam injection pass



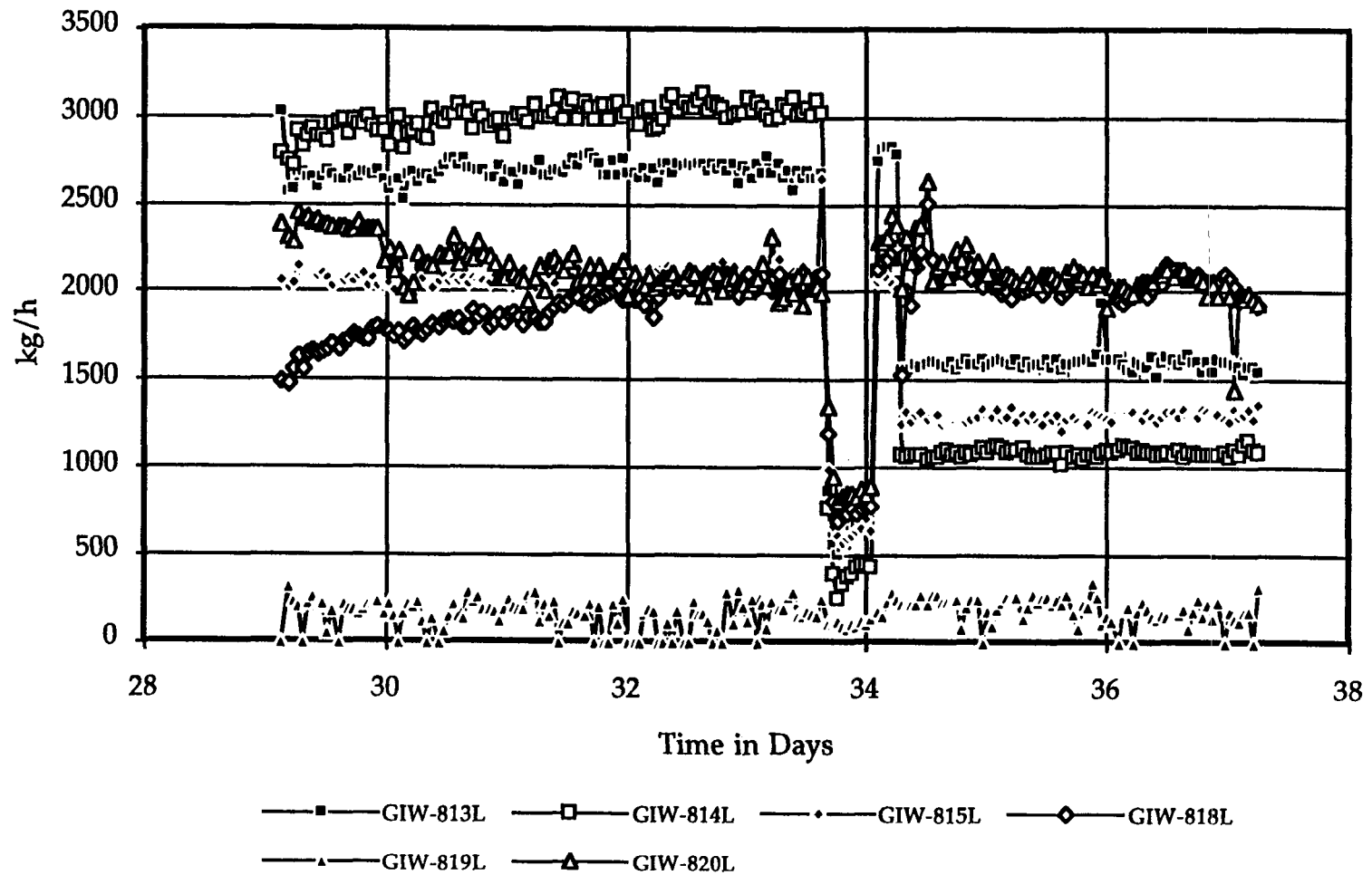
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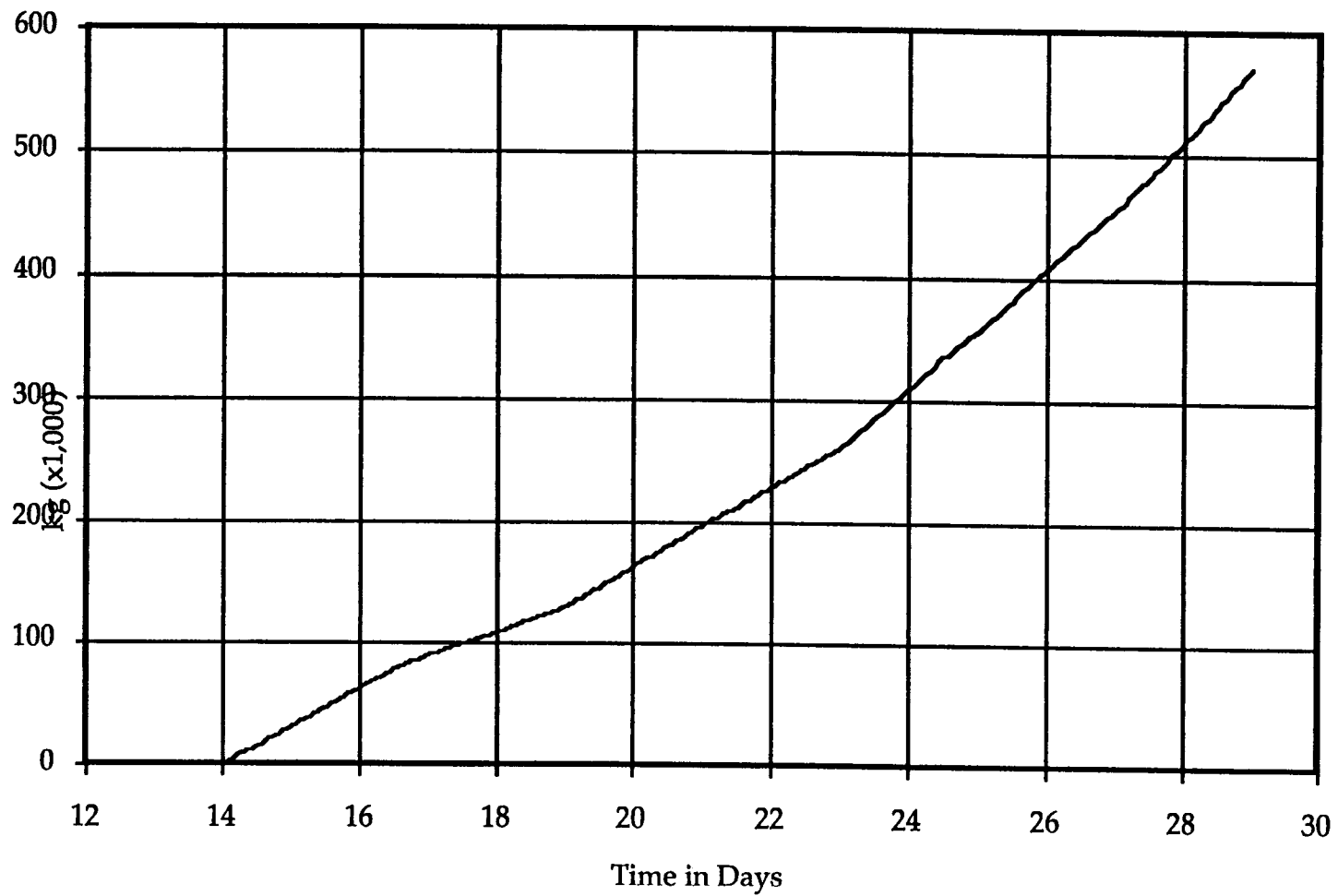
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Injection rates into the lower screened intervals
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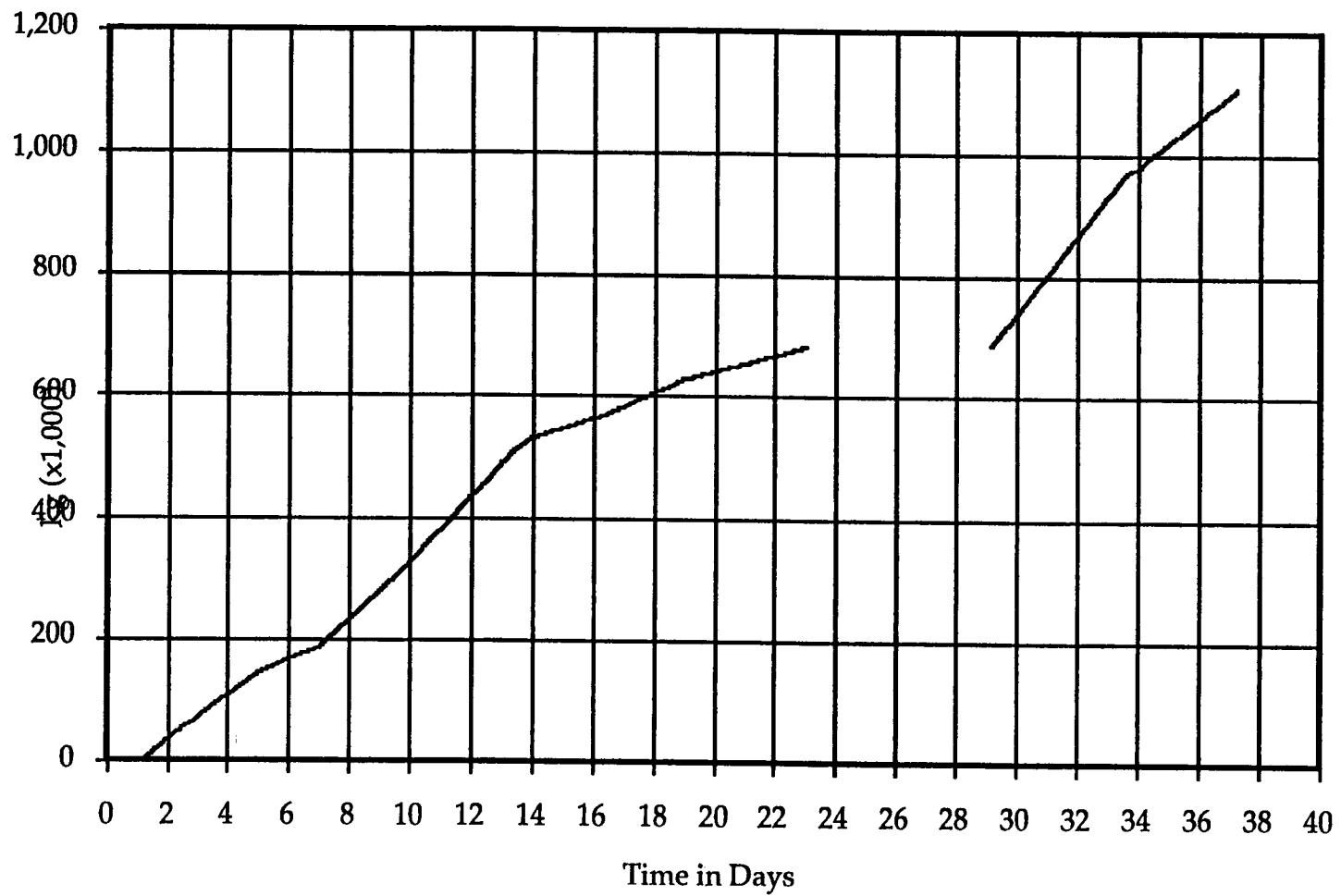
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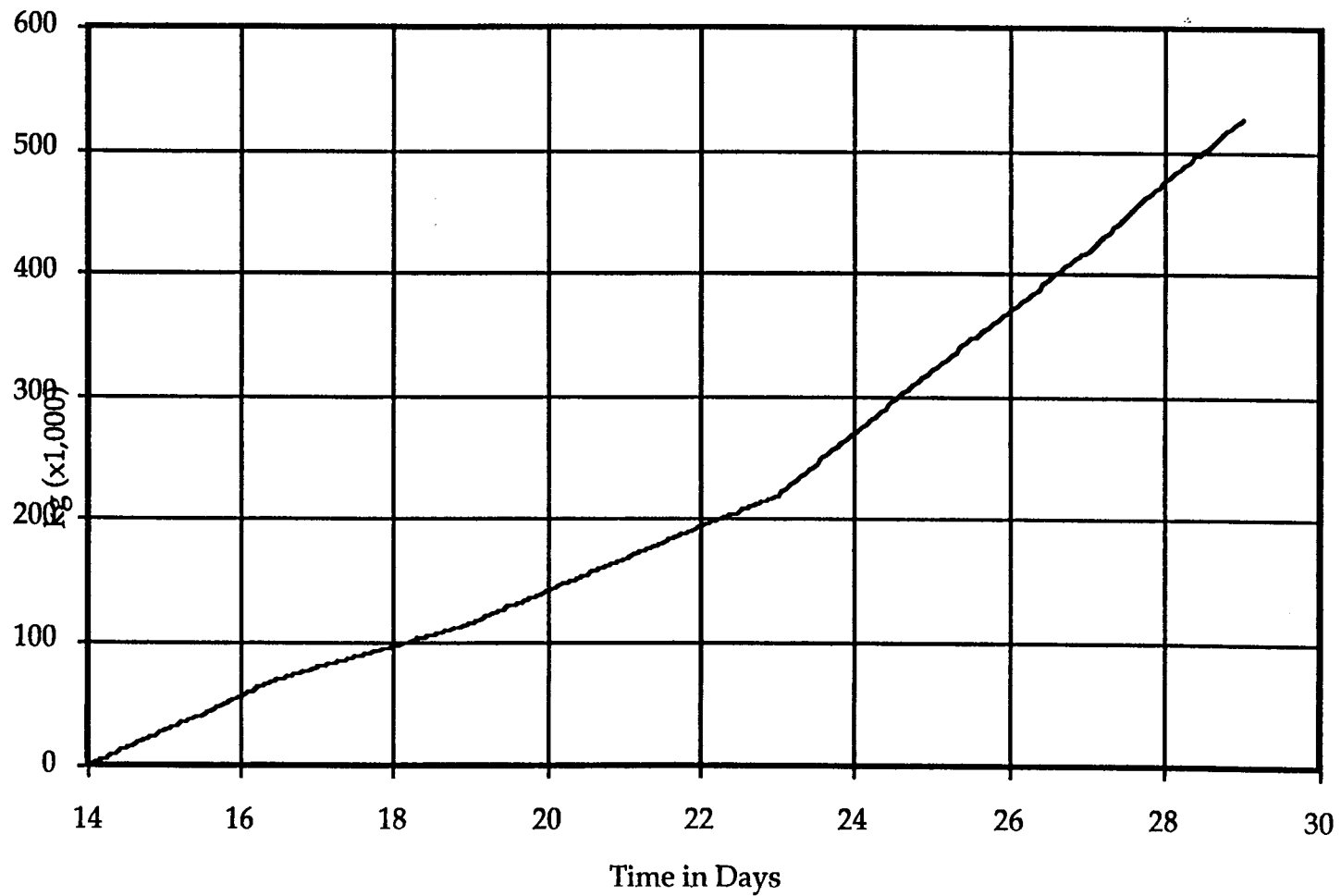
Dynamic Underground Stripping Project
Cumulative steam flow into the upper screened
interval of injection well GIW-813
during the first steam injection pass



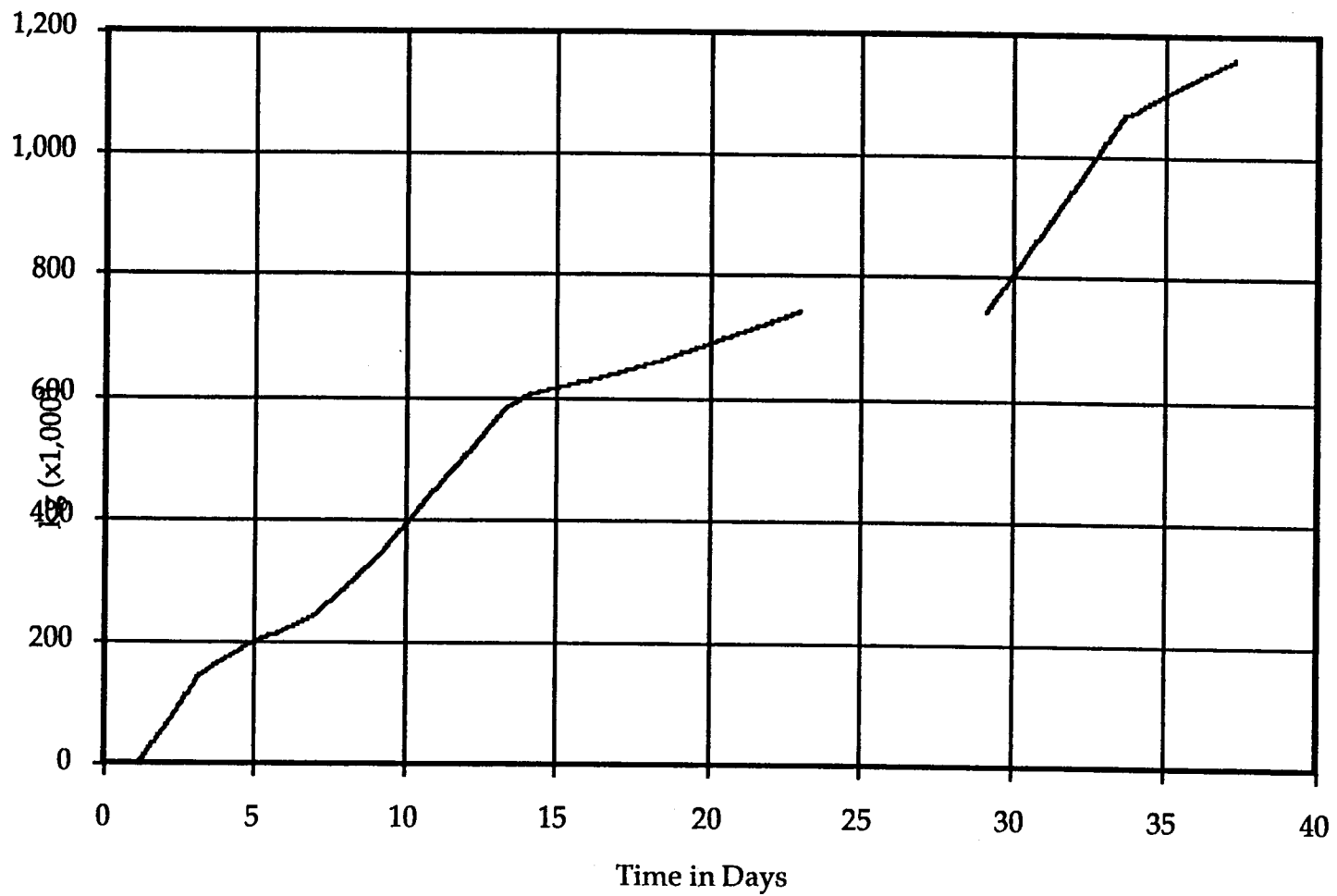
Dynamic Underground Stripping Project
Cumulative steam flow into the lower screened
interval of injection well GIW-813
during the first steam injection pass



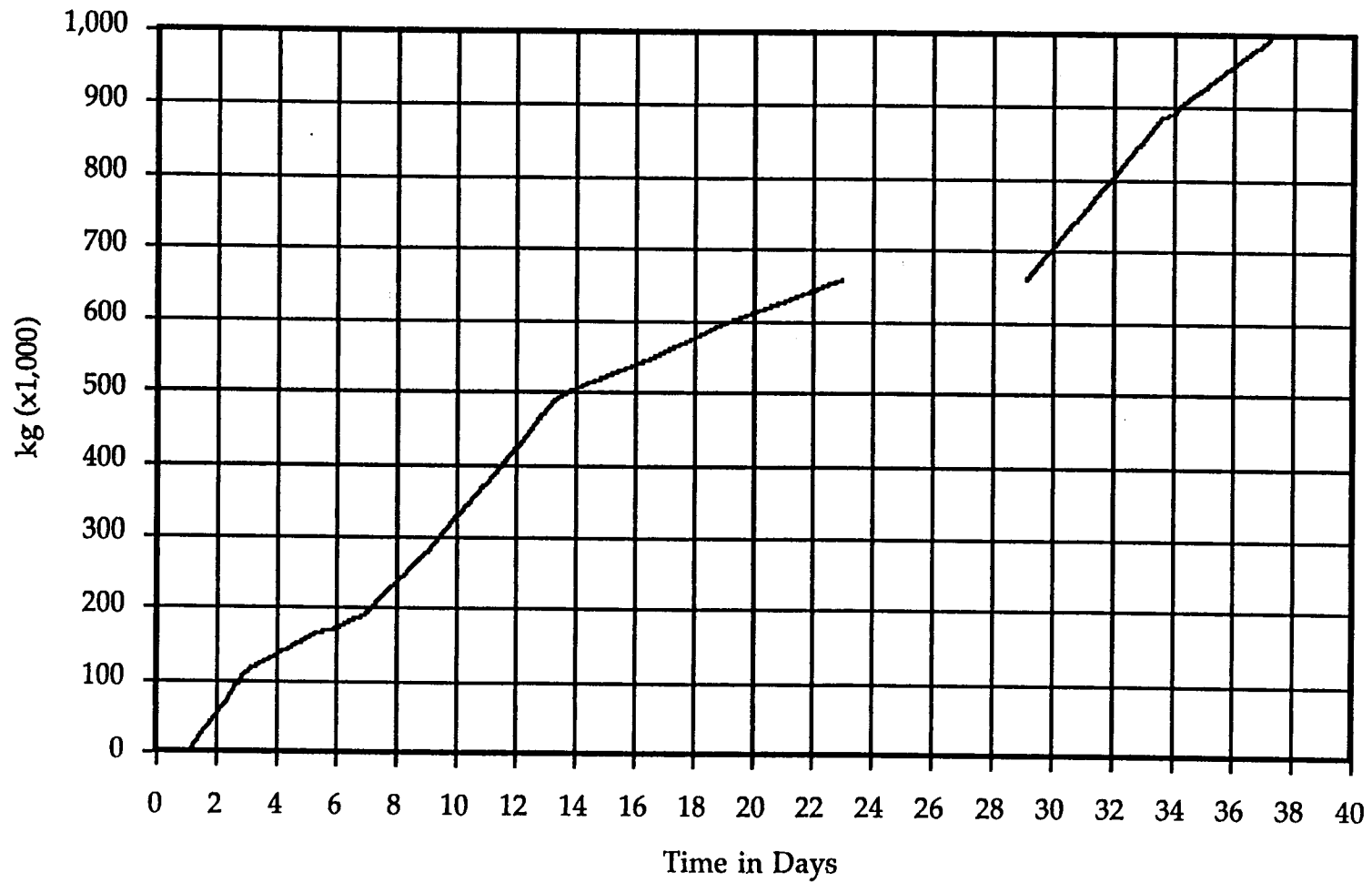
Dynamic Underground Stripping Project
Cumulative steam flow into the upper screened
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during the first steam injection pass



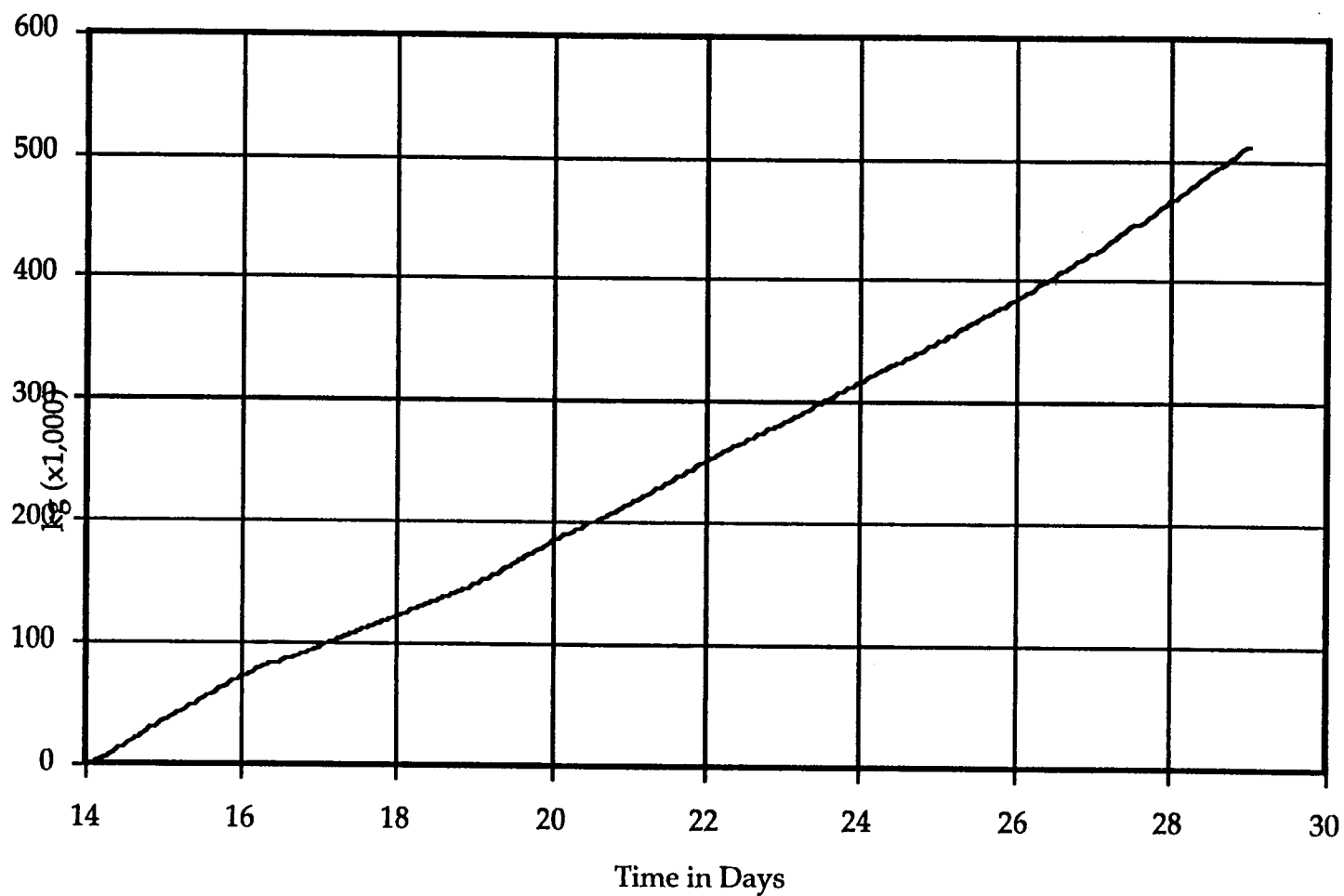
Dynamic Underground Stripping Project
Cumulative steam flow into the lower screened
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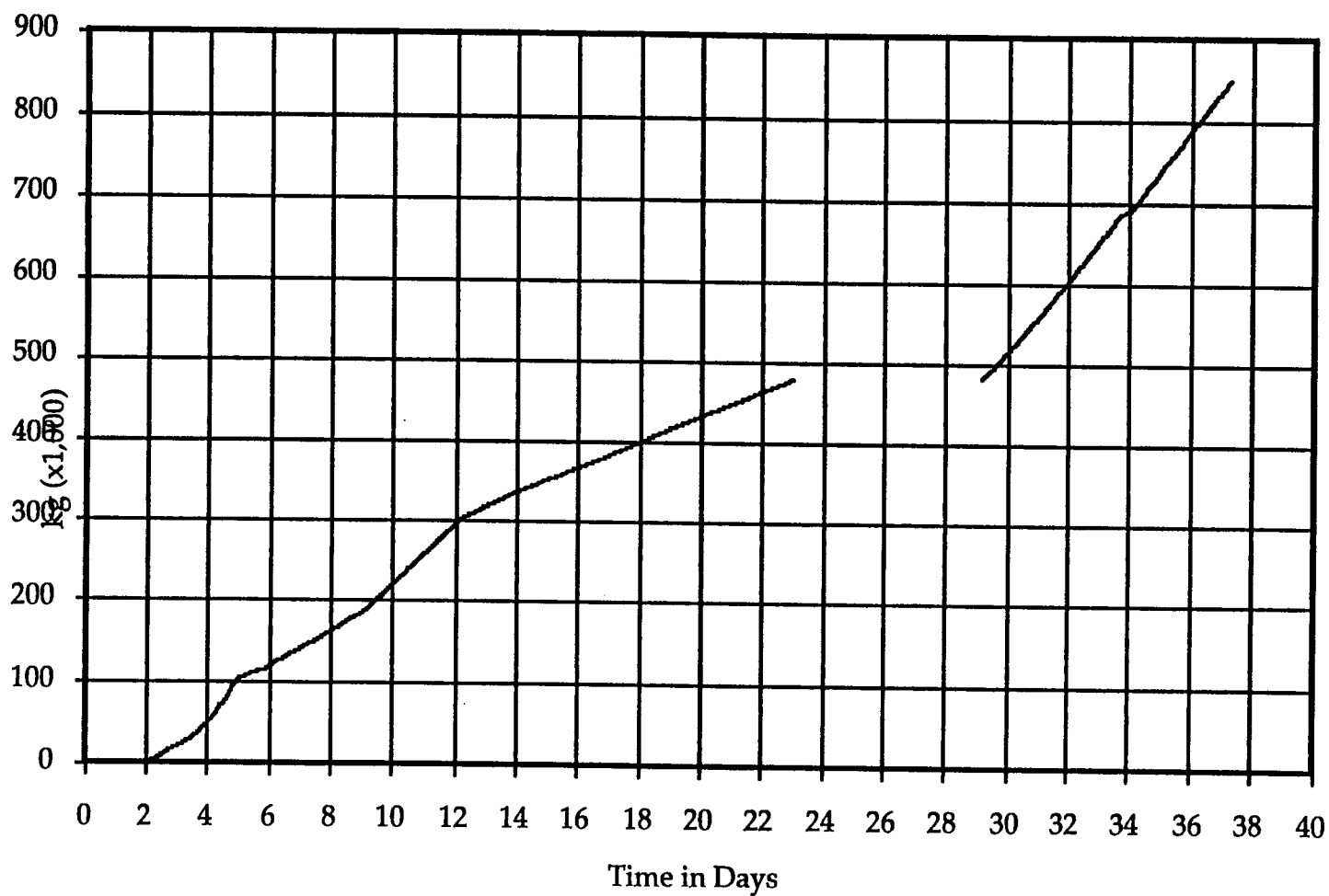
Dynamic Underground Stripping Project
Cumulative steam flow into the lower screened
interval of injection well GIW-815



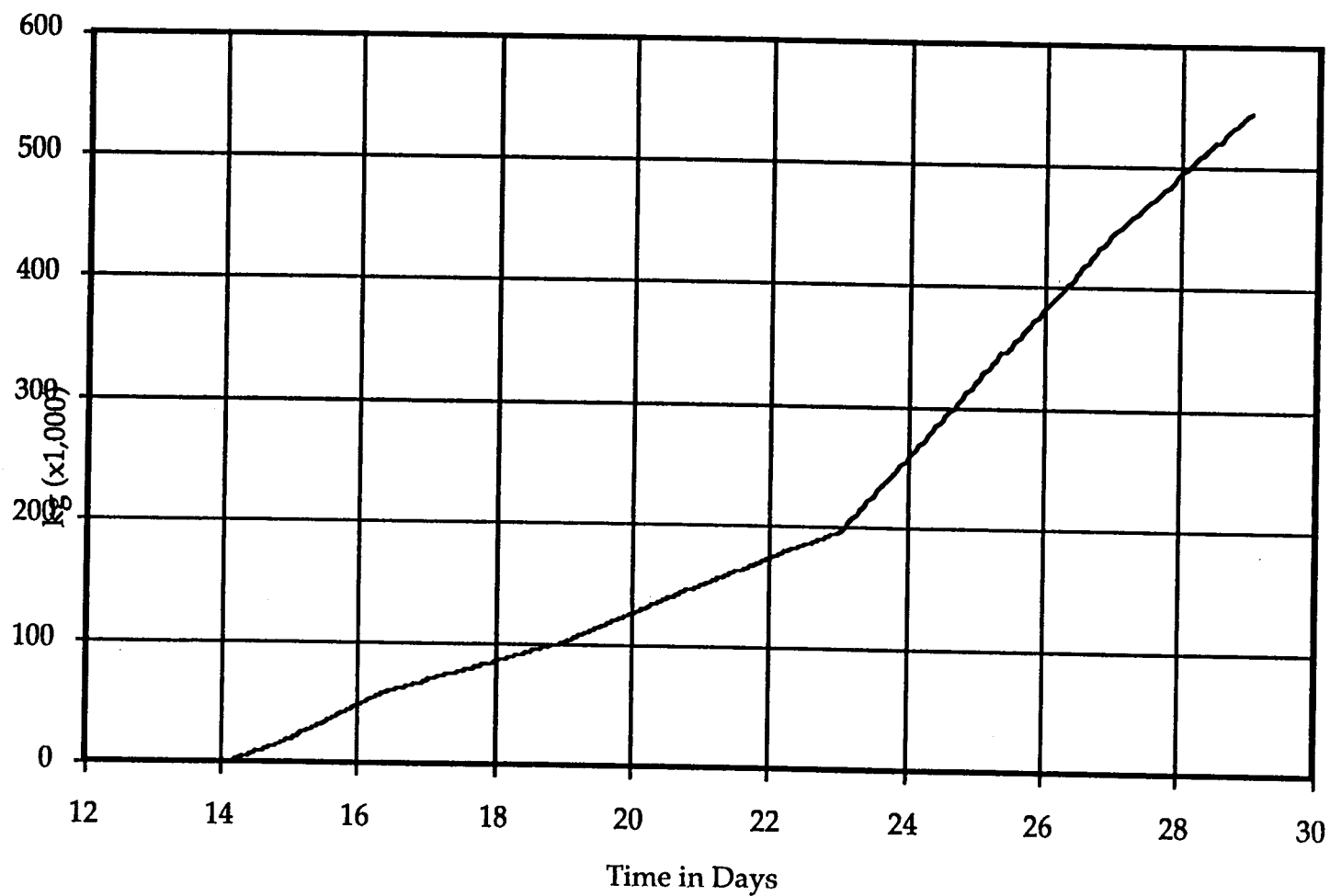
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Cumulative steam flow into the upper screened
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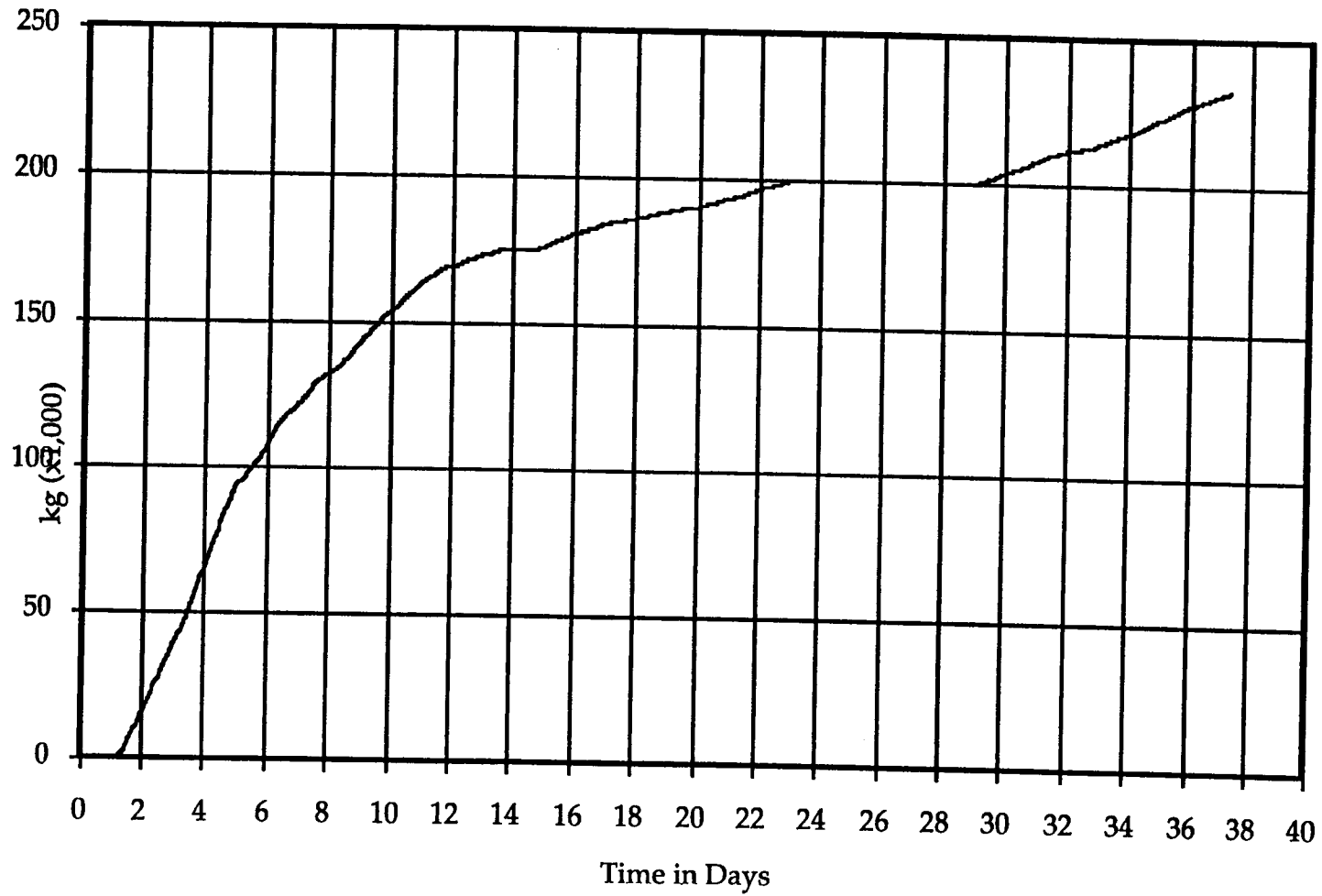
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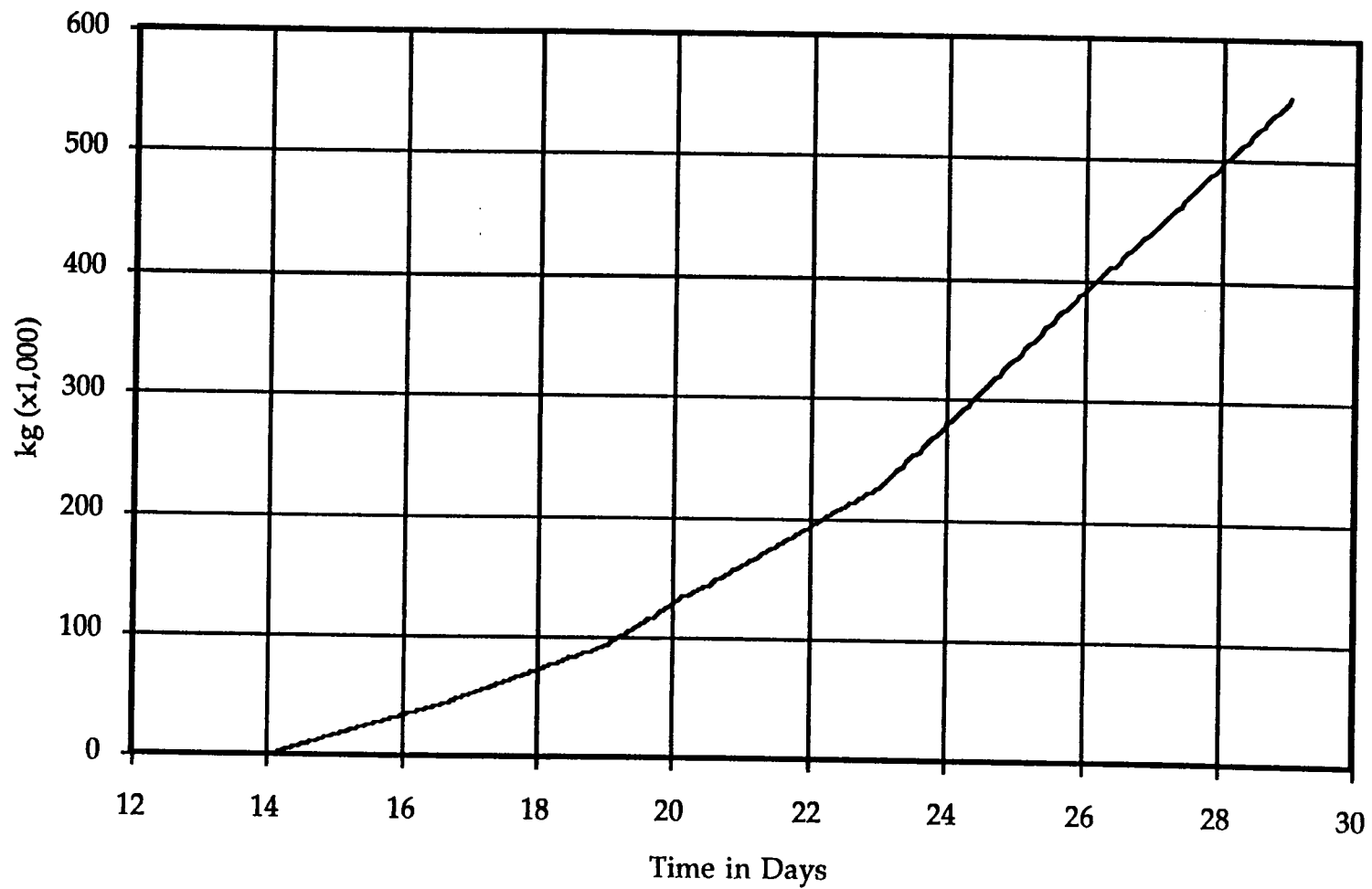
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Cumulative steam flow into the upper screened
interval of injection well GIW-818
during the first steam injection pass



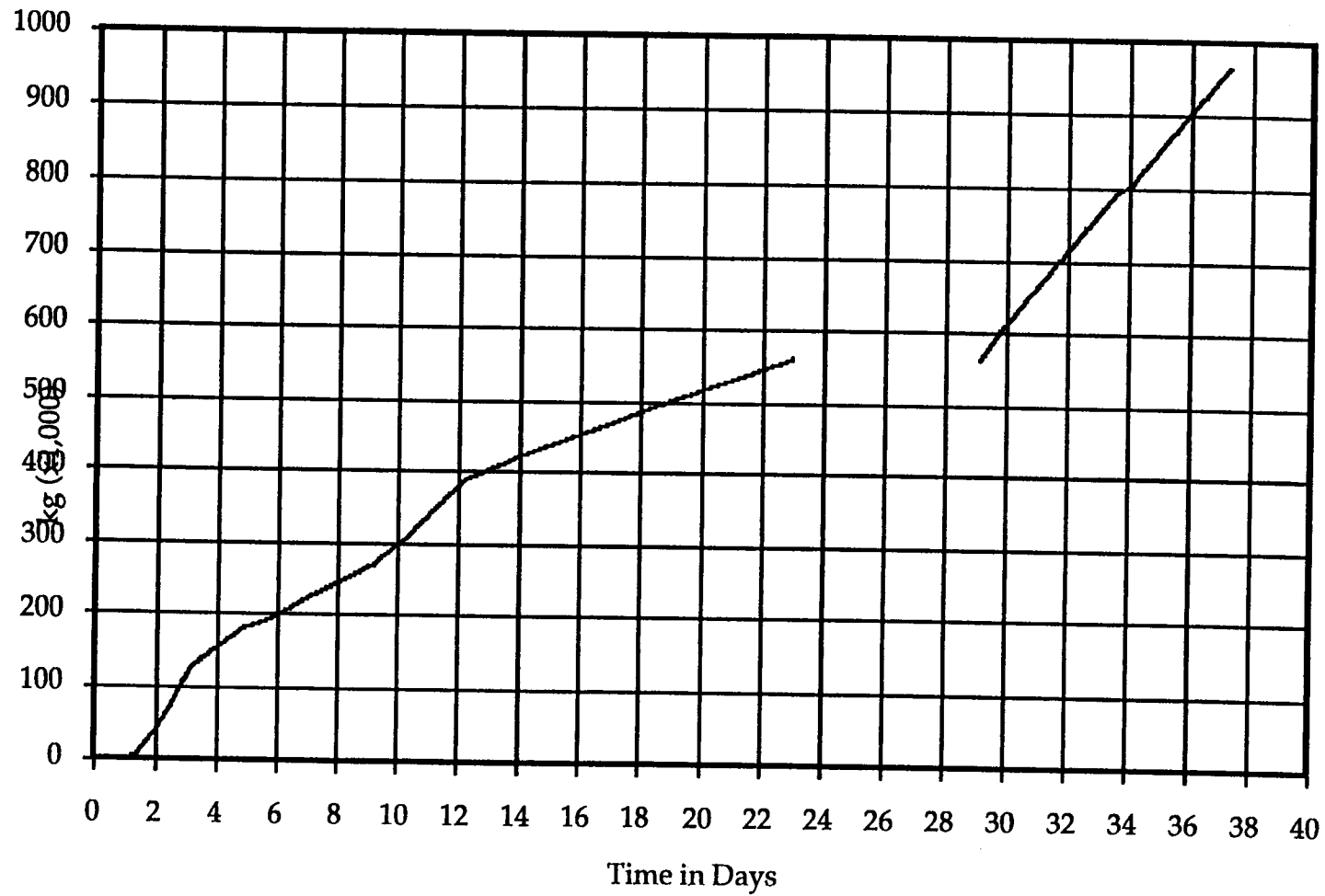
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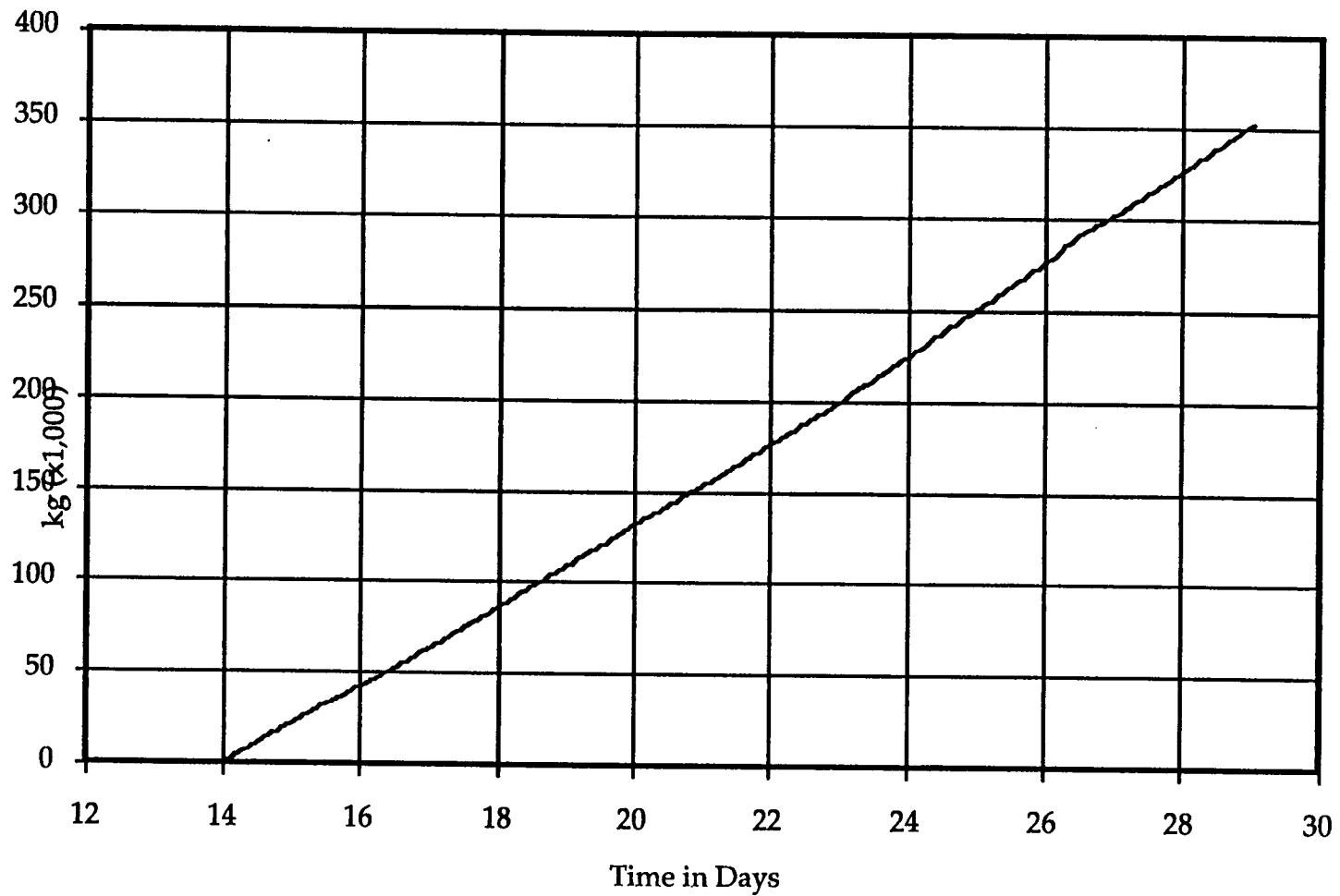
Dynamic Underground Stripping Project
Cumulative steam flow into the upper screened
interval of injection well GIW-819



Dynamic Underground Stripping Project
Cumulative steam flow into the lower screened
interval of injection well GIW-820
during the first steam injection pass

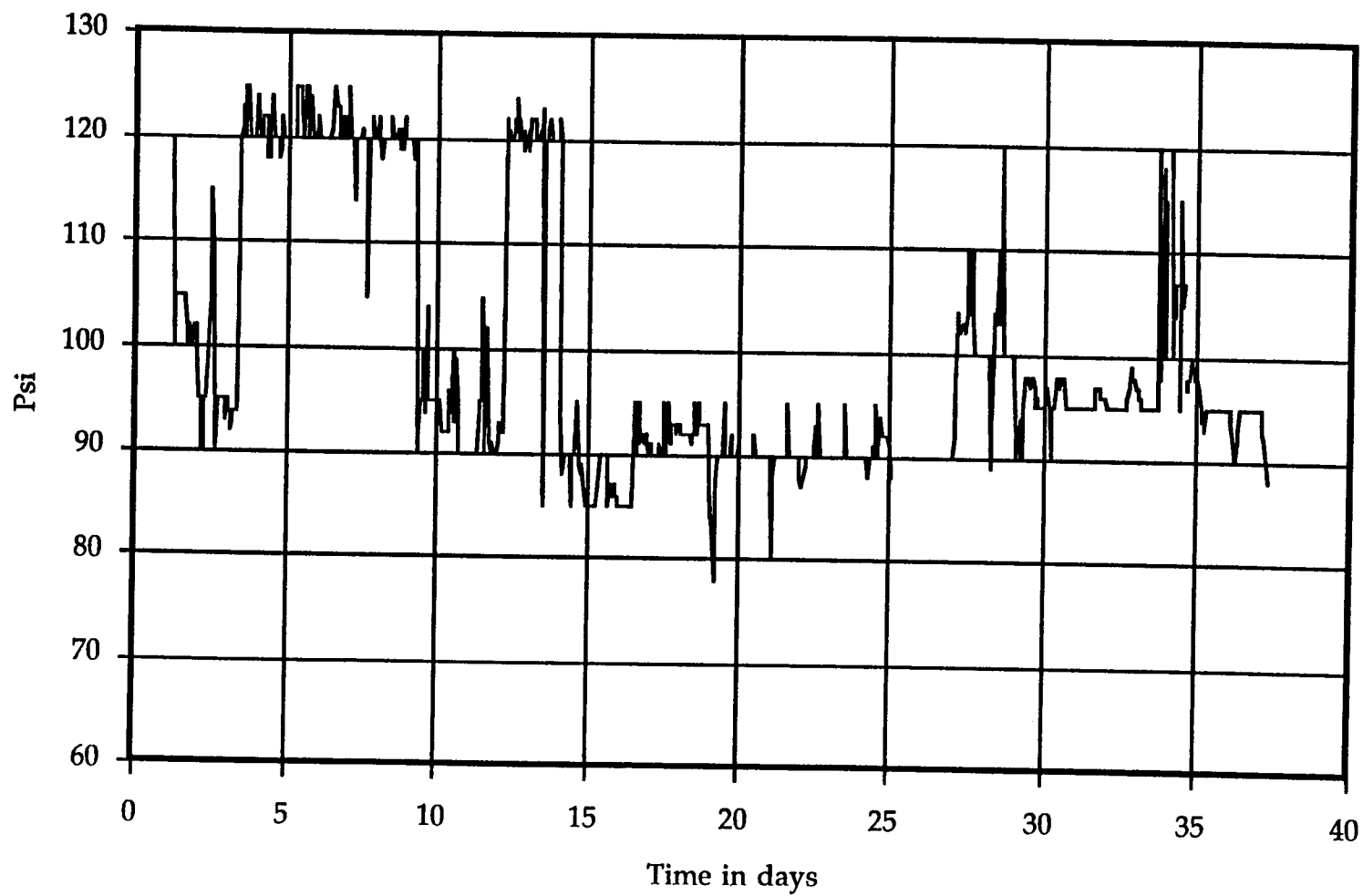


Dynamic Underground Stripping Project
Cumulative steam flow into the upper screened
interval of injection well GIW-820
during the first steam injection pass

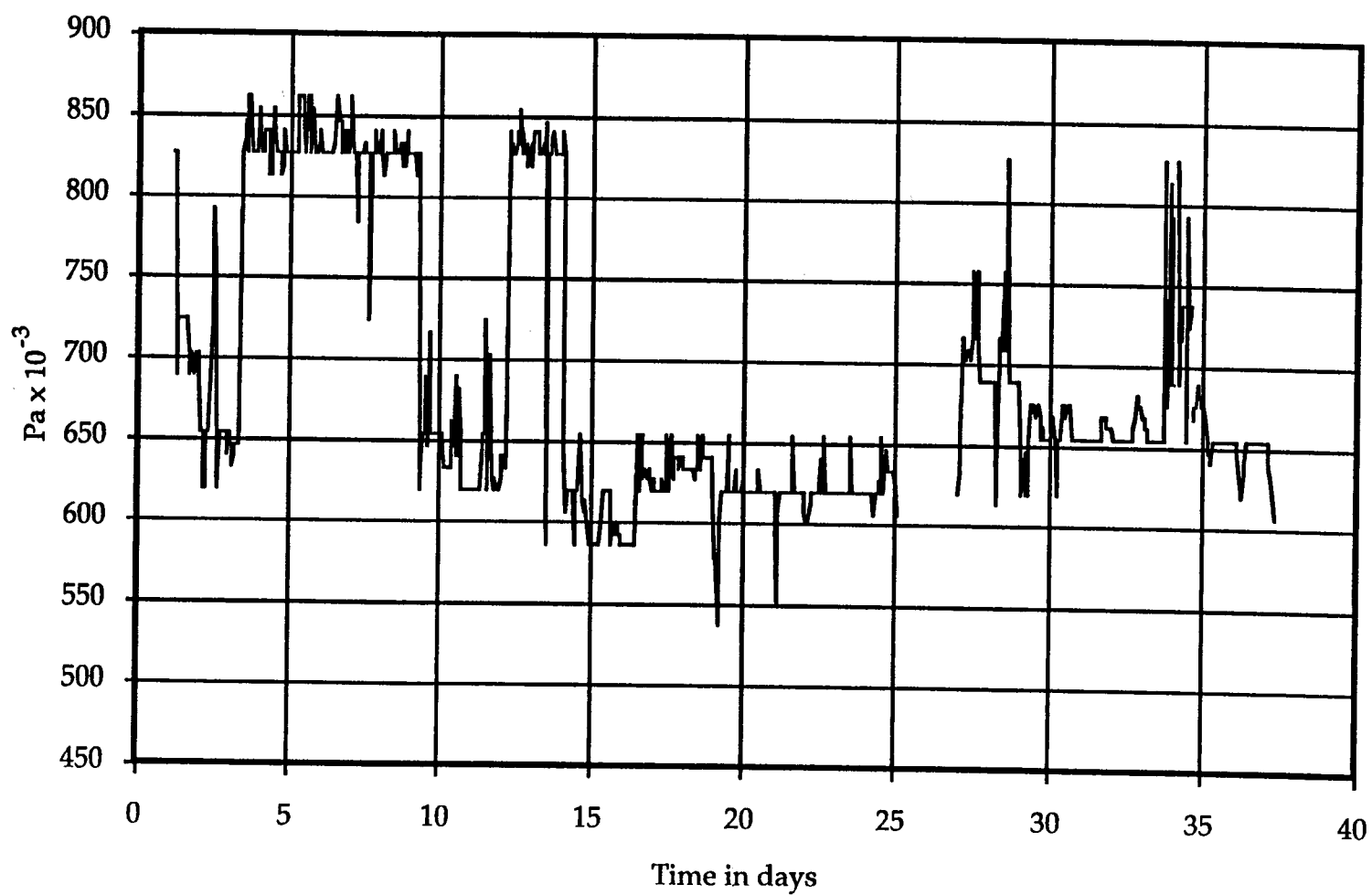


The following are plots of boiler operational data for the first pass of steam injection. Steam was injected for a total of 37 days beginning on February 4, 1993 and ending on March 12, 1993. During the first pass, the boiler was operated continuously, running 24 hours per day for the 37 days. Steam was injected continuously into the upper screened interval, the lower screened interval or both. Injection rates into individual wells varied depending upon the need to control the movement of steam into specific areas. The decision to vary injection rates was based upon real time data such as temperature profiles and Electrical Resistance Tomography (ERT) images.

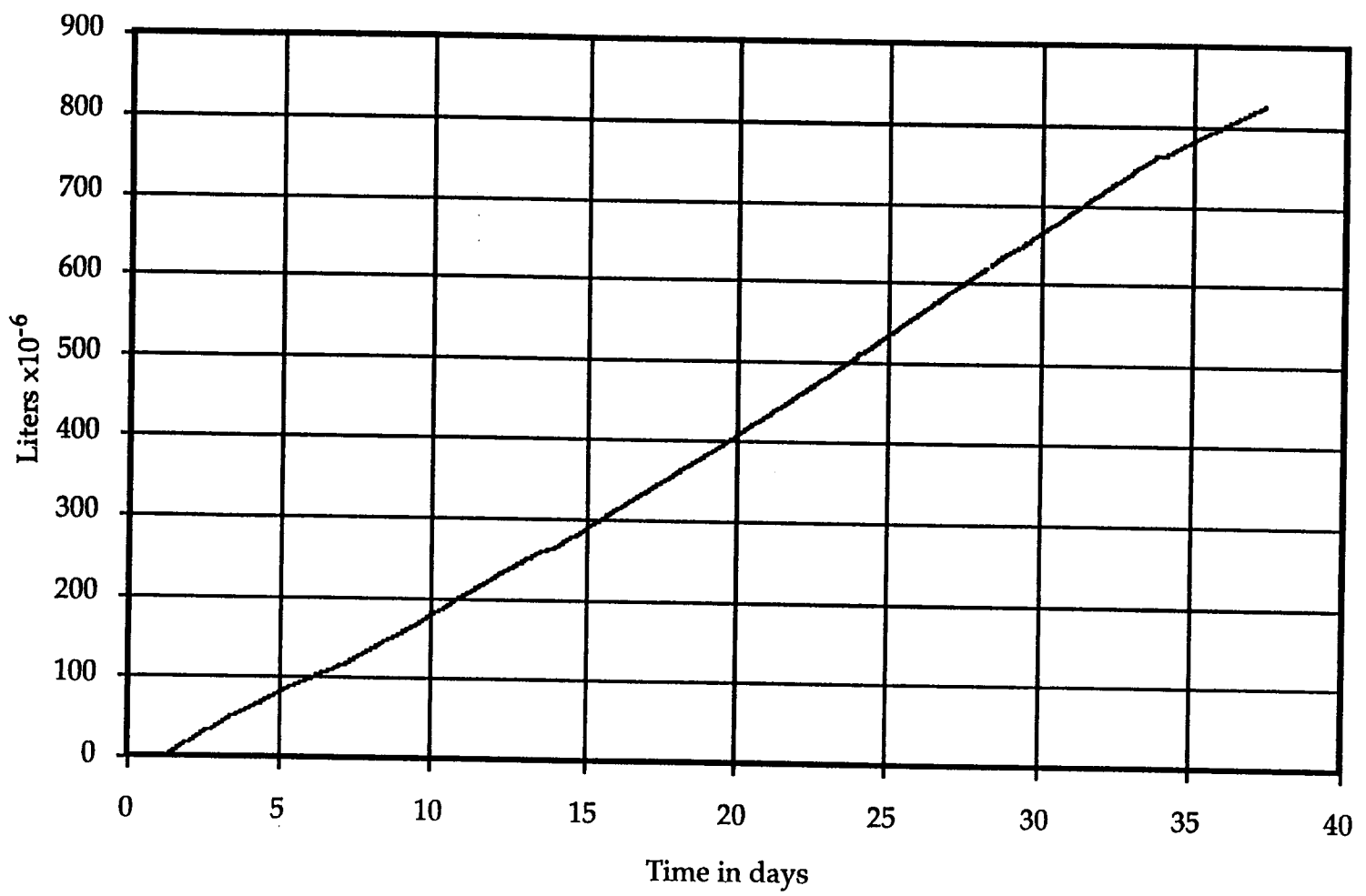
Dynamic Underground Stripping Project
Boiler operating pressure during
the first steam injection pass



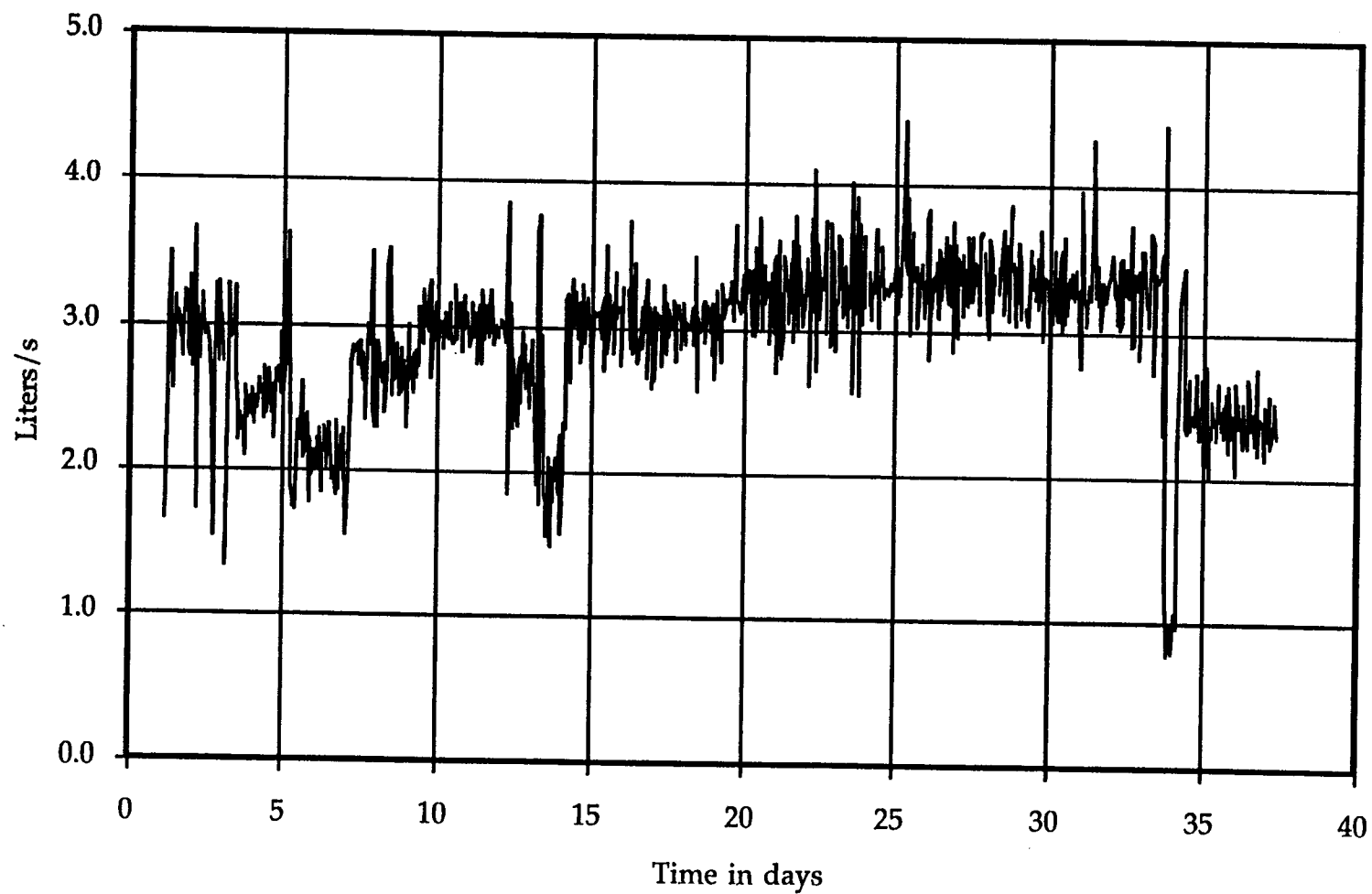
Dynamic Underground Stripping Project
Boiler operating pressure during
the first steam injection pass



Dynamic Underground Stripping Project
Cumulative boiler water usage during
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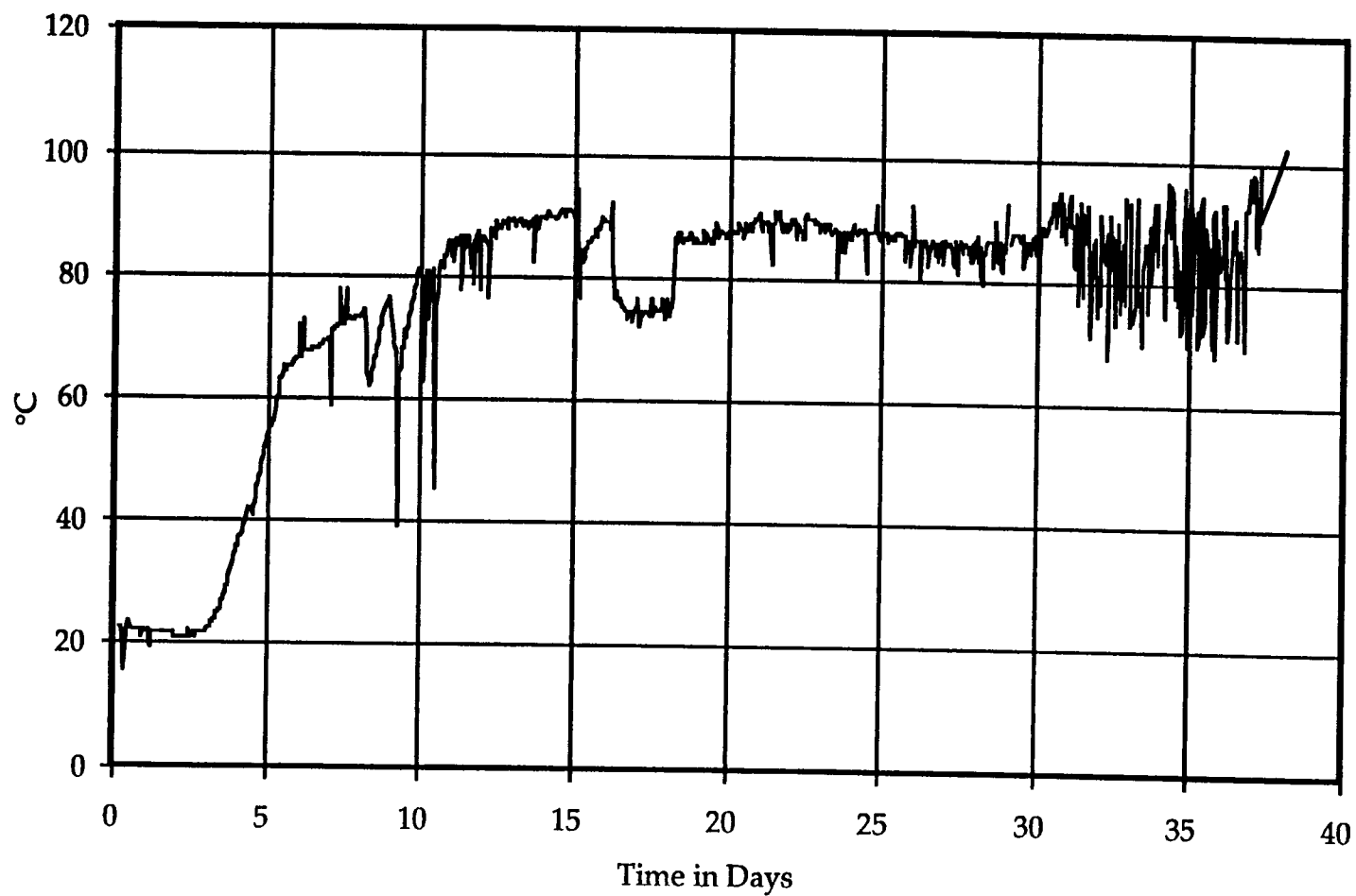


Dynamic Underground Stripping Project
Average boiler water usage during
the first steam injection pass

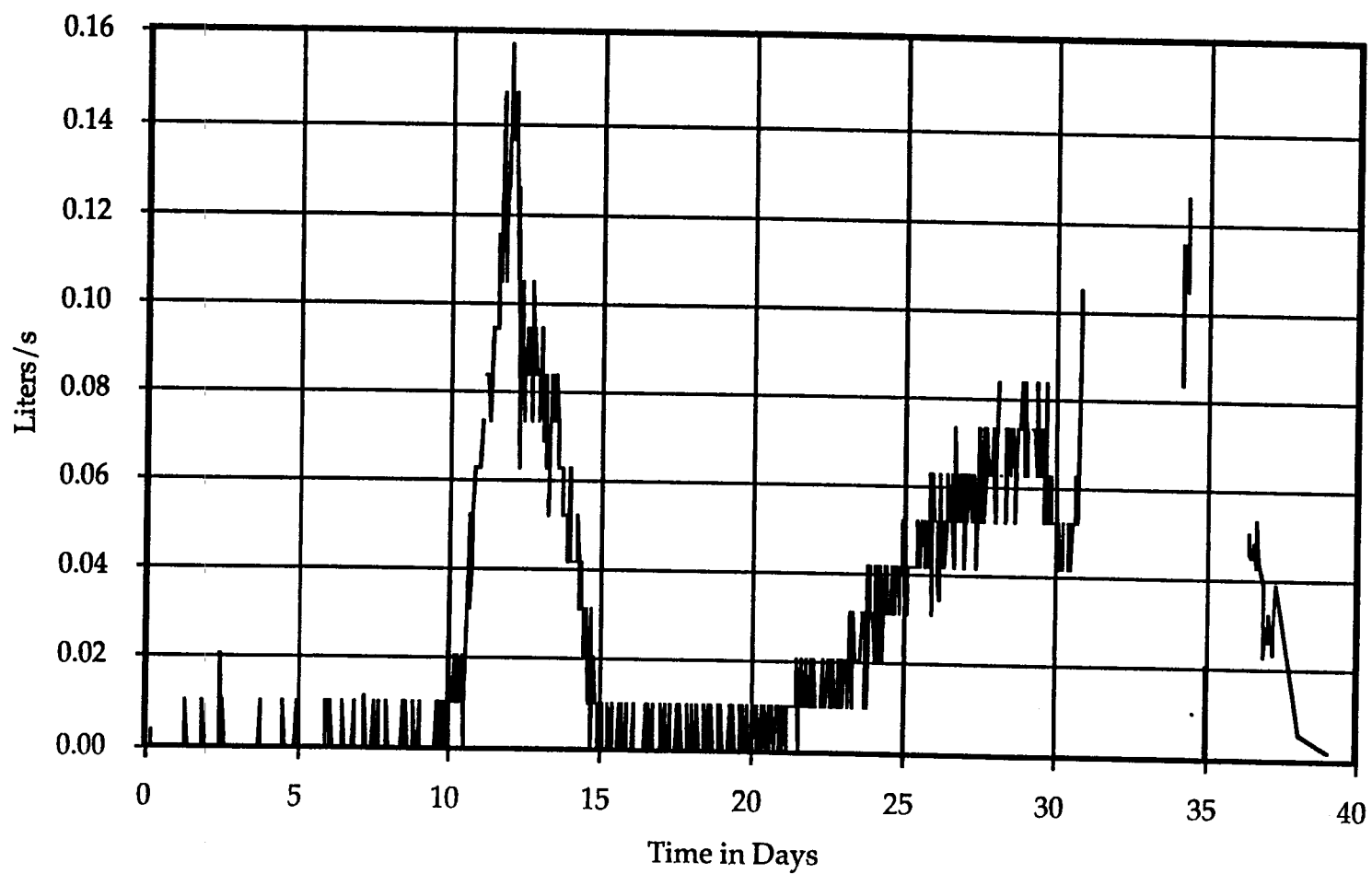


The following are plots of treatment and extraction facility operational data for the first pass of steam injection. Steam was injected for a total of 37 days beginning on February 4, 1993 and ending on March 12, 1993. During the first pass, the boiler was operated continuously, running 24 hours per day for the 37 days. Steam was injected continuously into either the upper screened interval, the lower screened interval or both. Injection rates into individual wells varied depending upon the need to control the movement of steam into specific areas. The decision to vary injection rates was based upon real time data such as temperature profiles and Electrical Resistance Tomography (ERT) images.

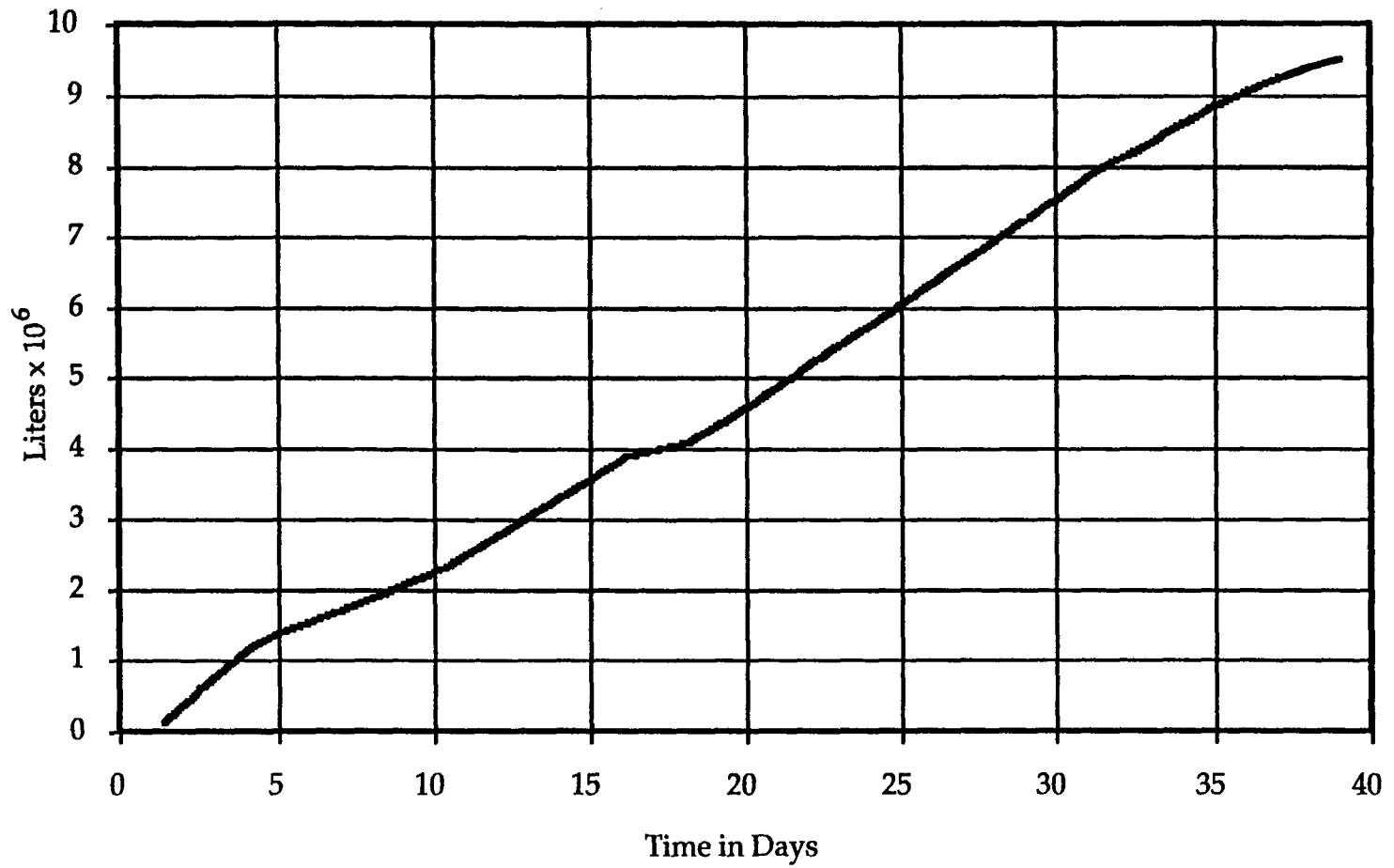
Dynamic Underground Stripping Project
Post condensor vapor temperature at the gas pad
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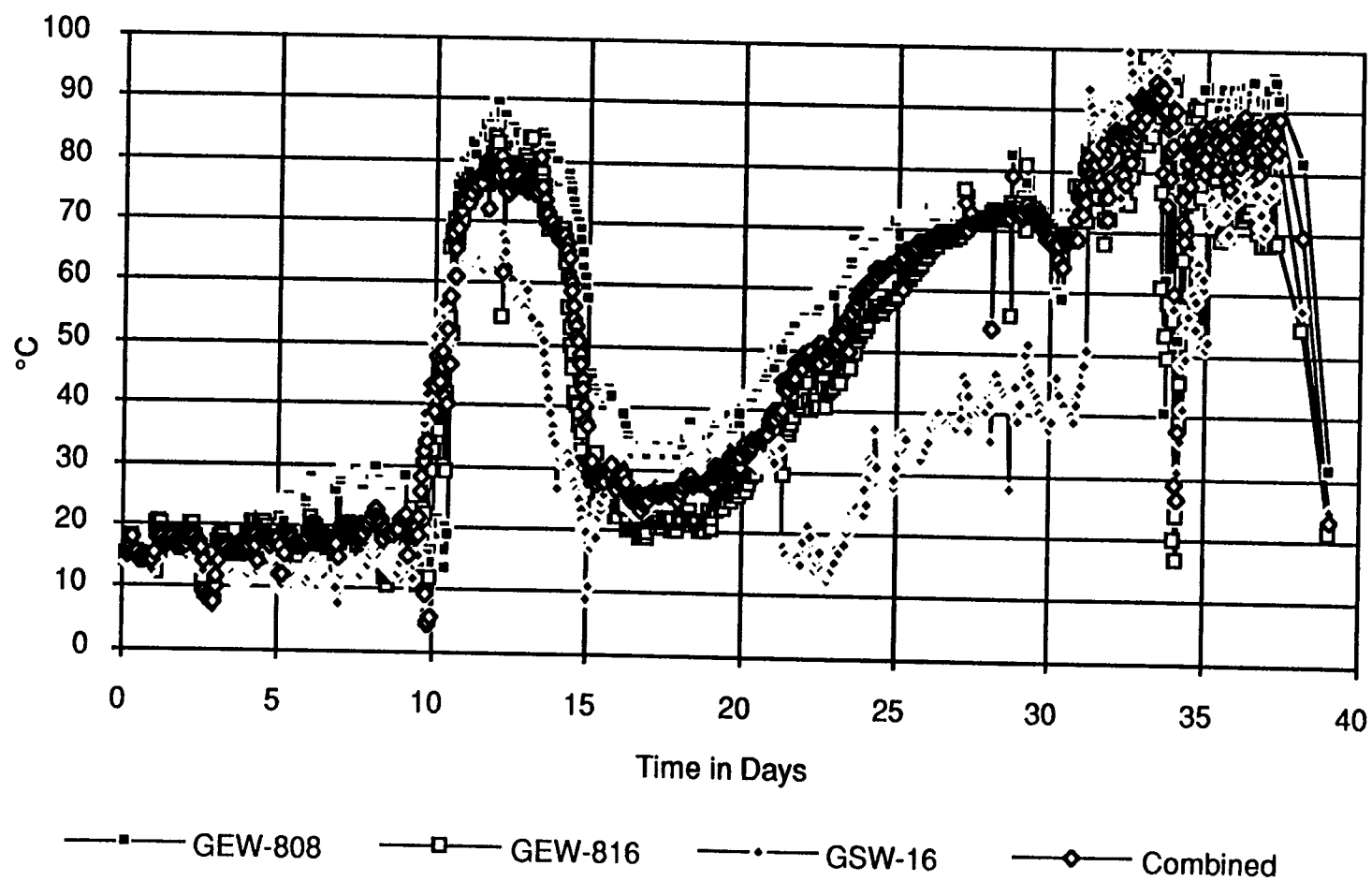
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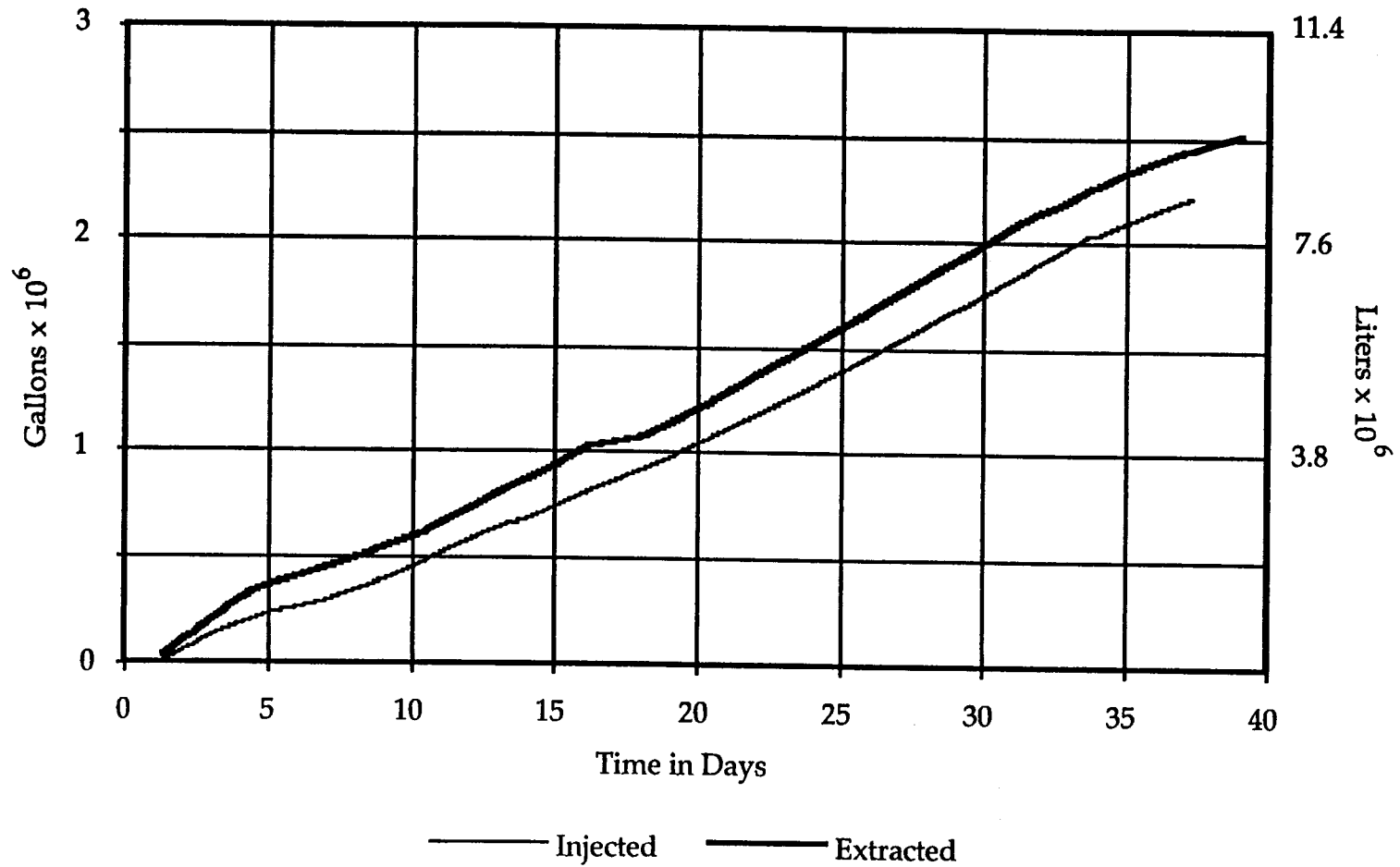
Dynamic Underground Stripping Project
Cumulative groundwater extracted at the gas pad
during the first steam injection pass



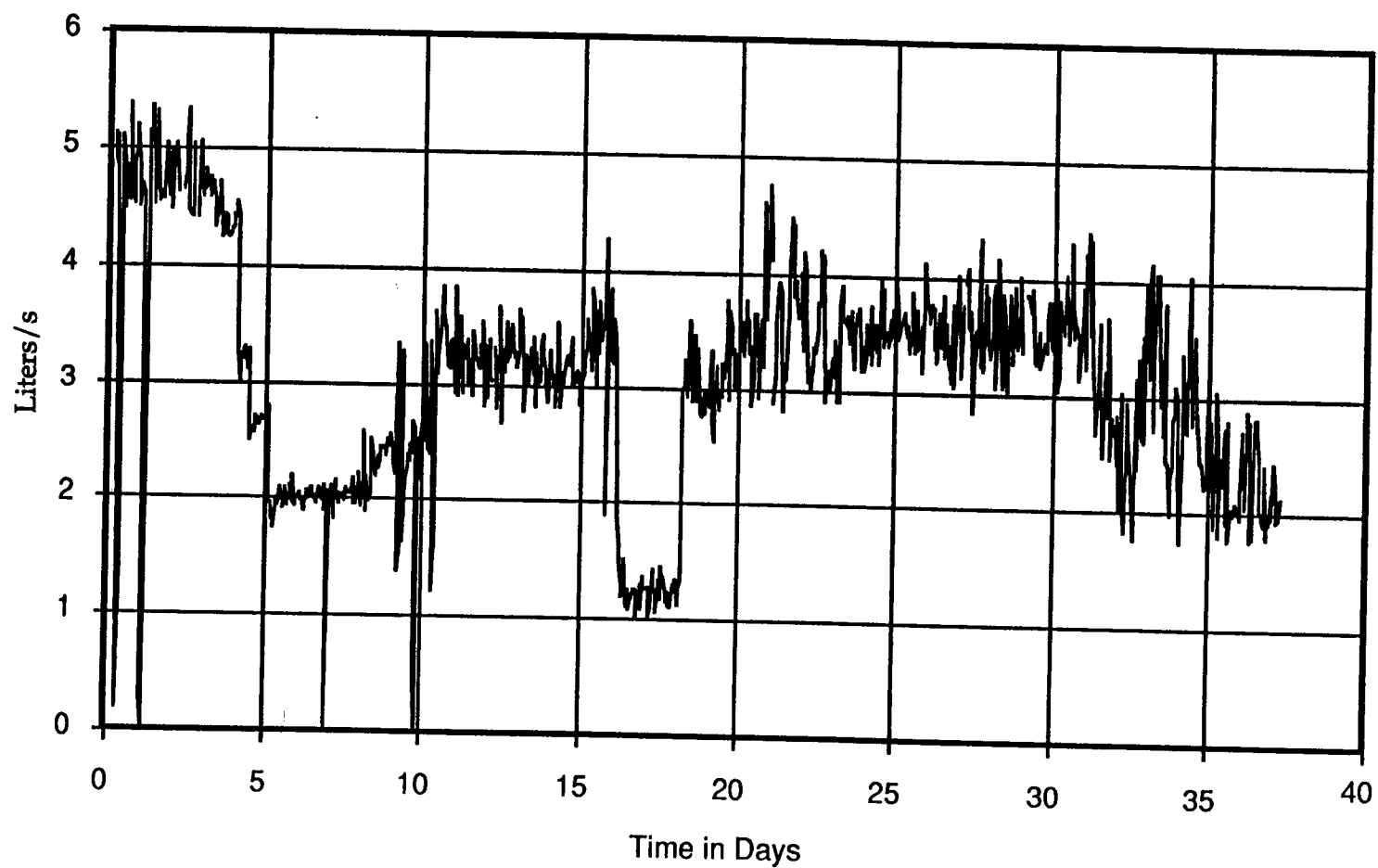
Dynamic Underground Stripping Project
Extraction well vapor temperatures during the
first steam injection pass



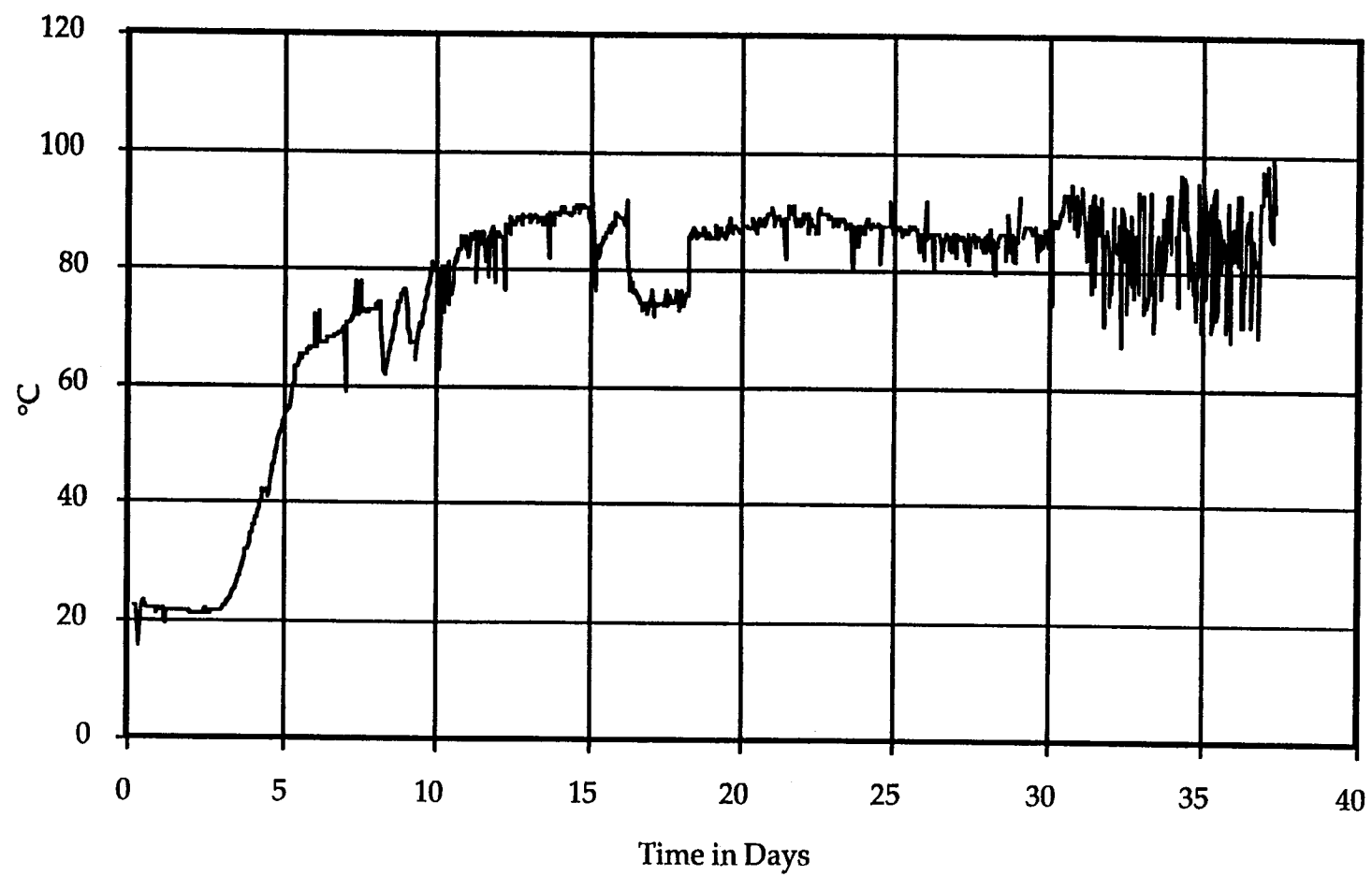
Dynamic Underground Stripping Project
Cumulative water injected and extracted at the gas
pad during the first steam injection pass



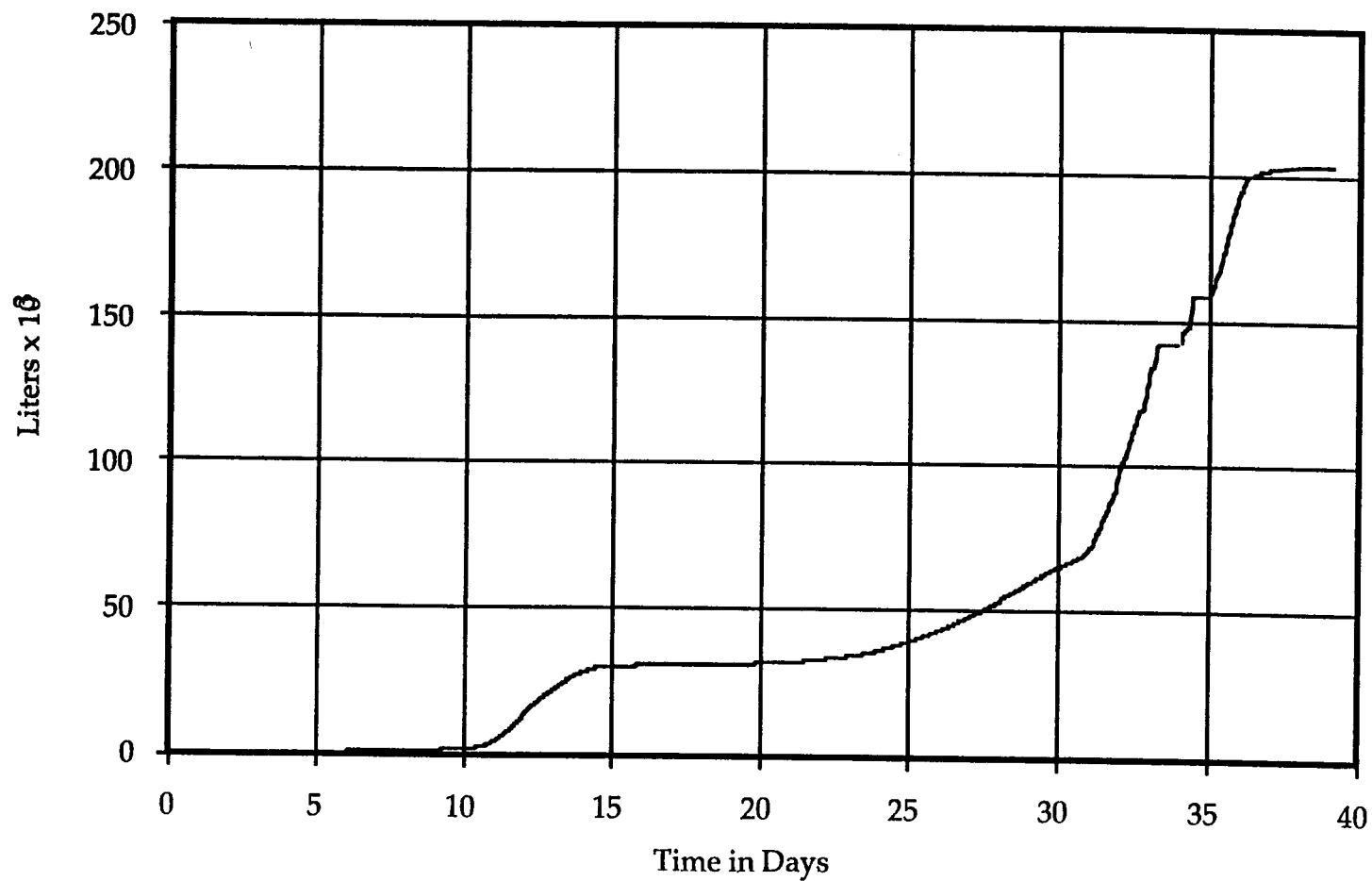
Dynamic Underground Stripping Project
Groundwater extraction rate at the gas pad
during the first steam injection pass



Dynamic Underground Stripping Project
Pumped groundwater temperature at the gas pad
during the first steam injection pass

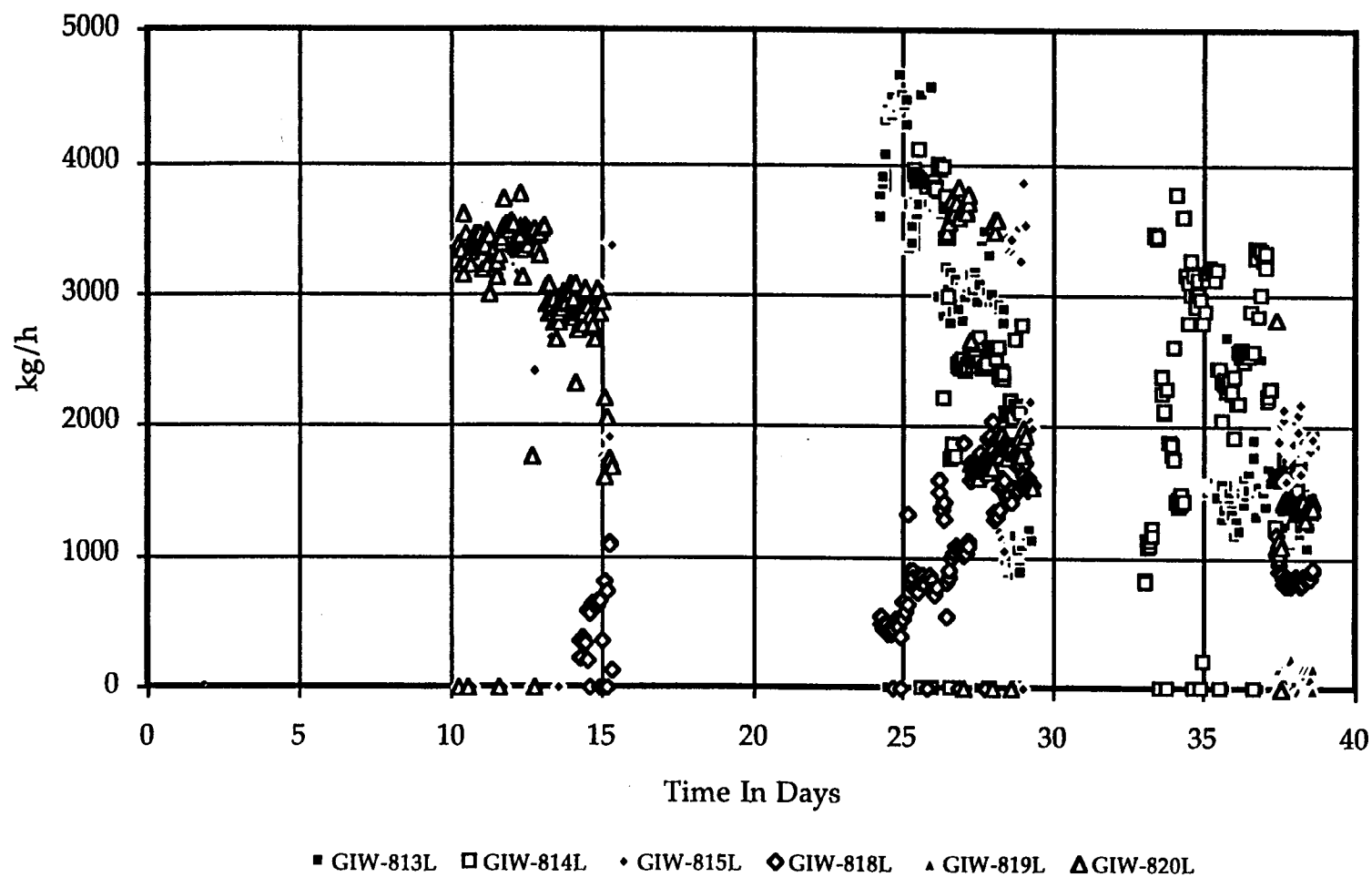


Dynamic Underground Stripping Project
Condensate accumulated at the gas pad
during the first steam injection pass

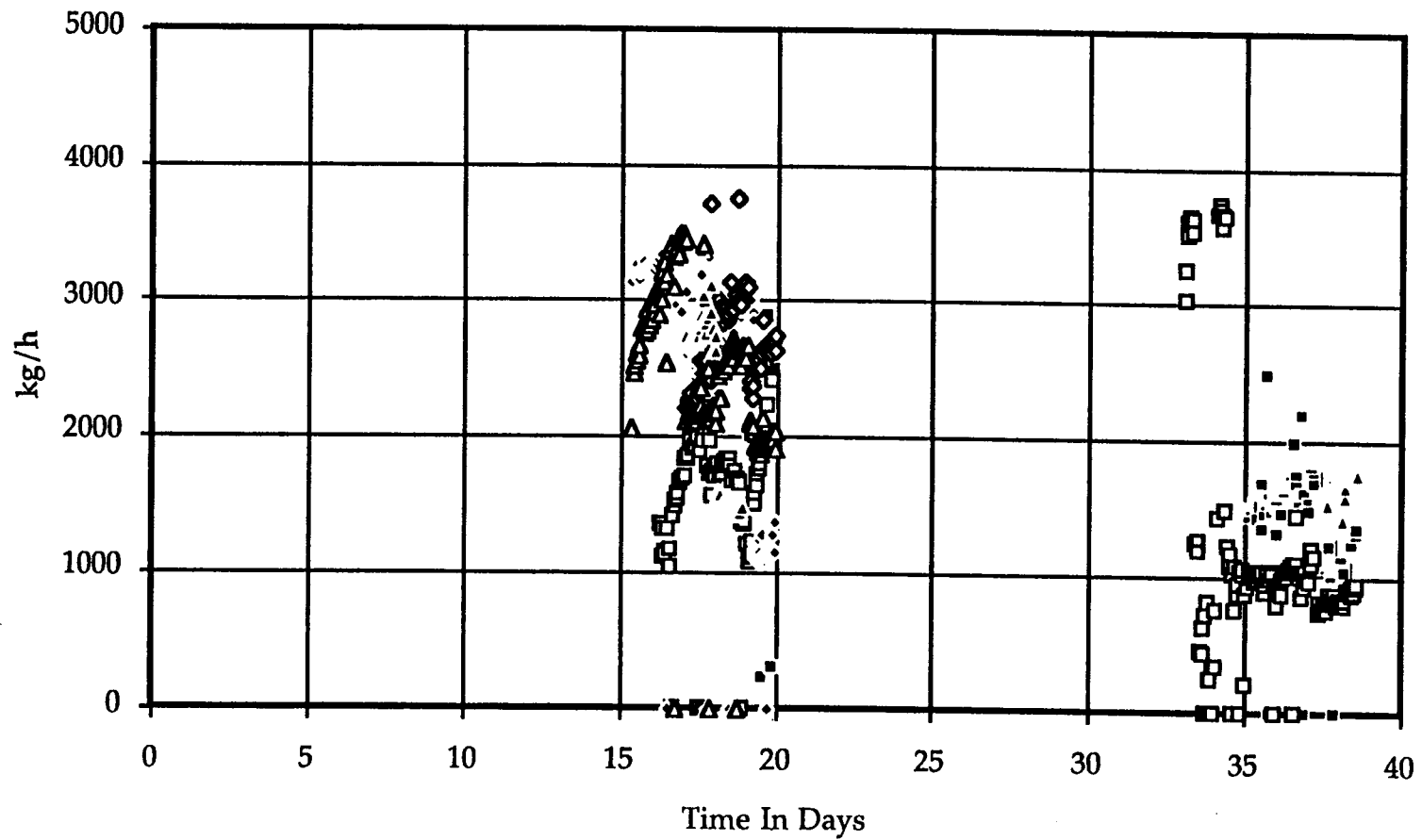


The following are plots of steam injection data during the second pass for each individual injection wellhead. Steam was injected intermittently for a total of 22 days beginning on June 2, 1993 and ending on June 30, 1993. During the second pass, the boiler was operated in a "huff and puff" mode. Steam was injected for four to five days and then shut off for another three to five days until a total of 20 days of boiler operating time was achieved. Extraction of vapor and liquid from the extraction wells continued uninterrupted whether the boiler was operational or not.

Dynamic Underground Stripping Project
 Steam injection rates into the lower screened intervals
 during the second steam injection pass

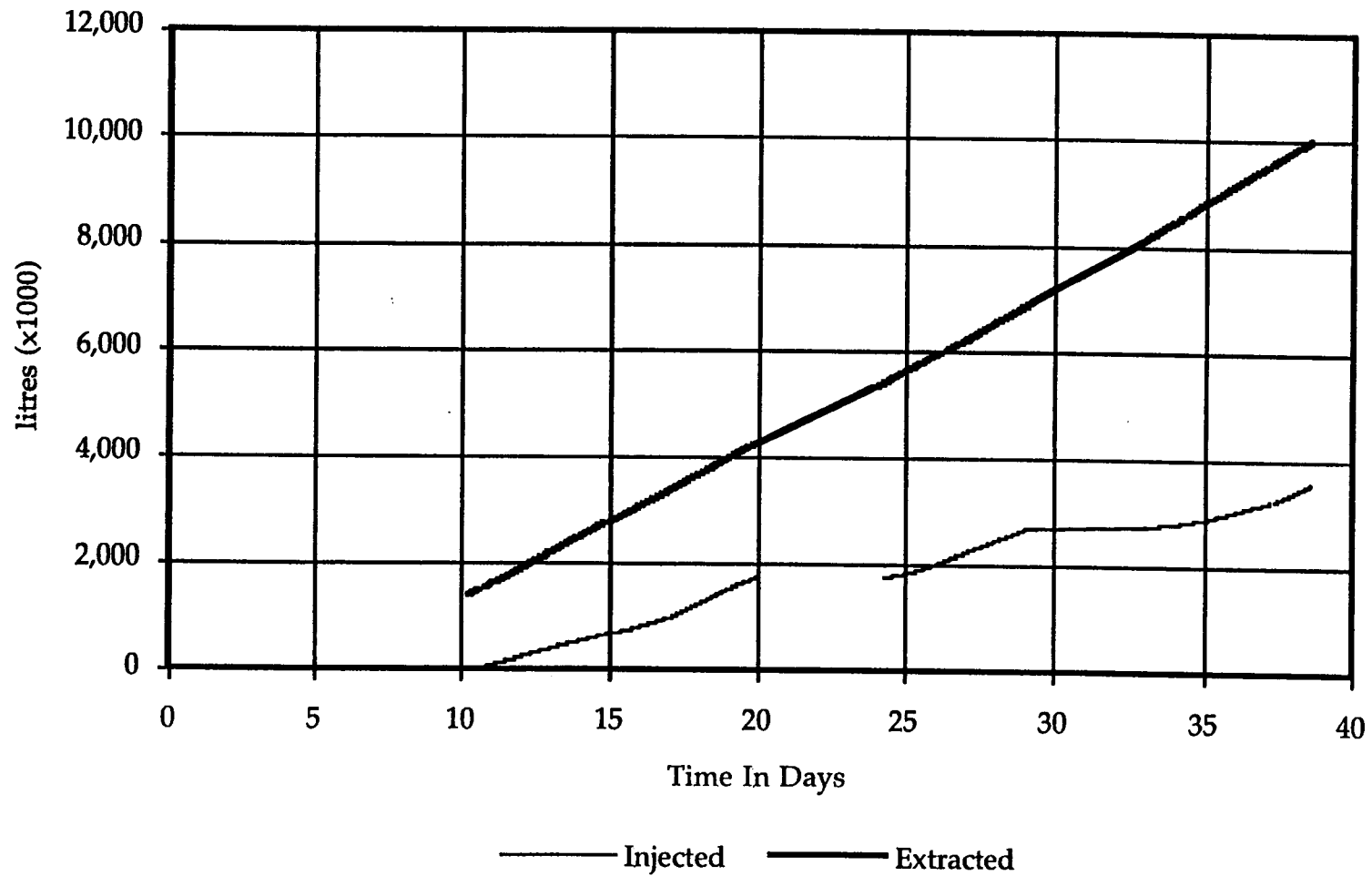


Dynamic Underground Stripping Project
 Steam injection rates into the upper screened intervals
 during the second steam injection pass

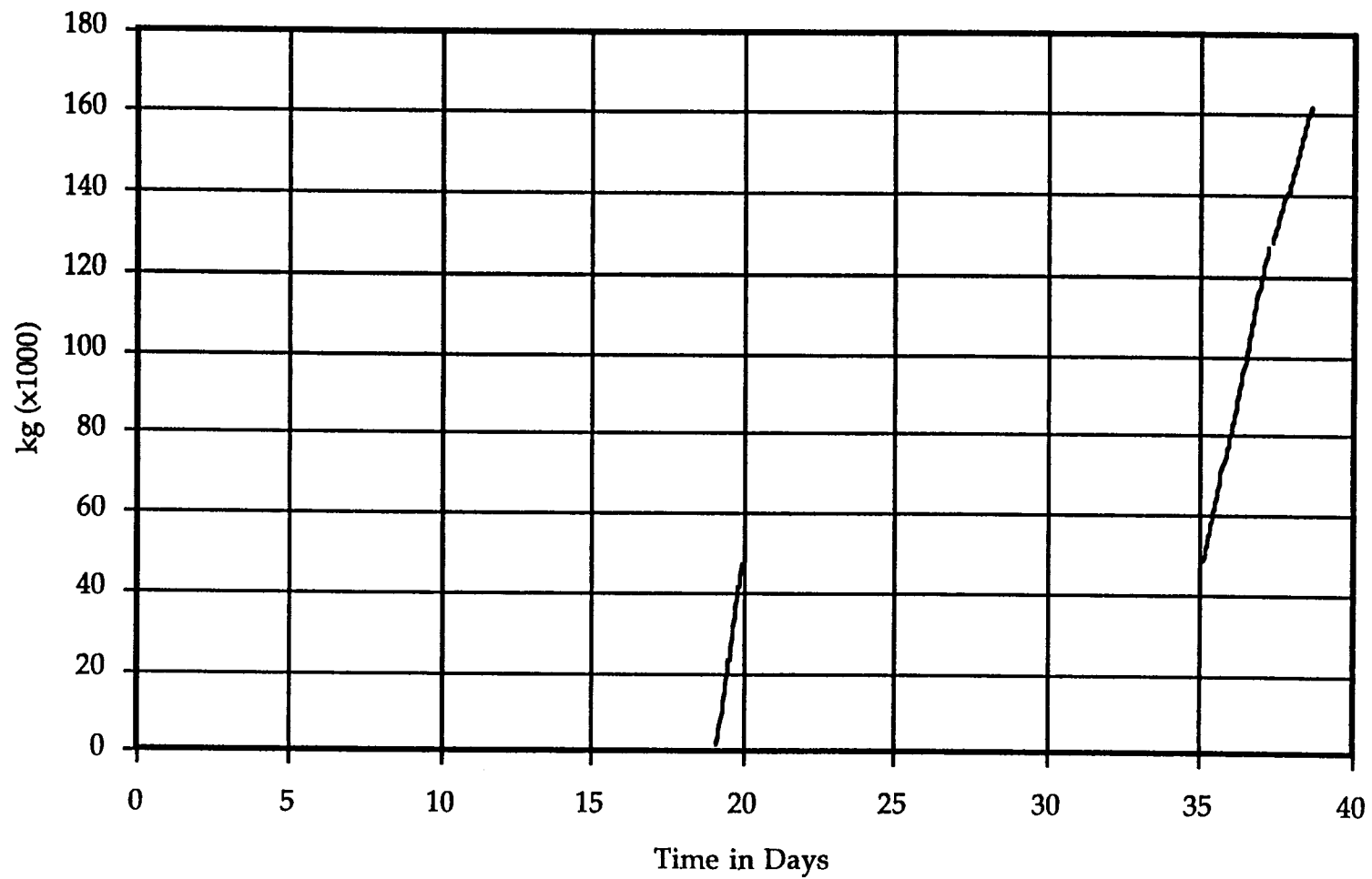


■ GIW-813U □ GIW-814U ♦ GIW-815U ◆ GIW-818U ▲ GIW-819U ▲ GIW-820U GIW-813U

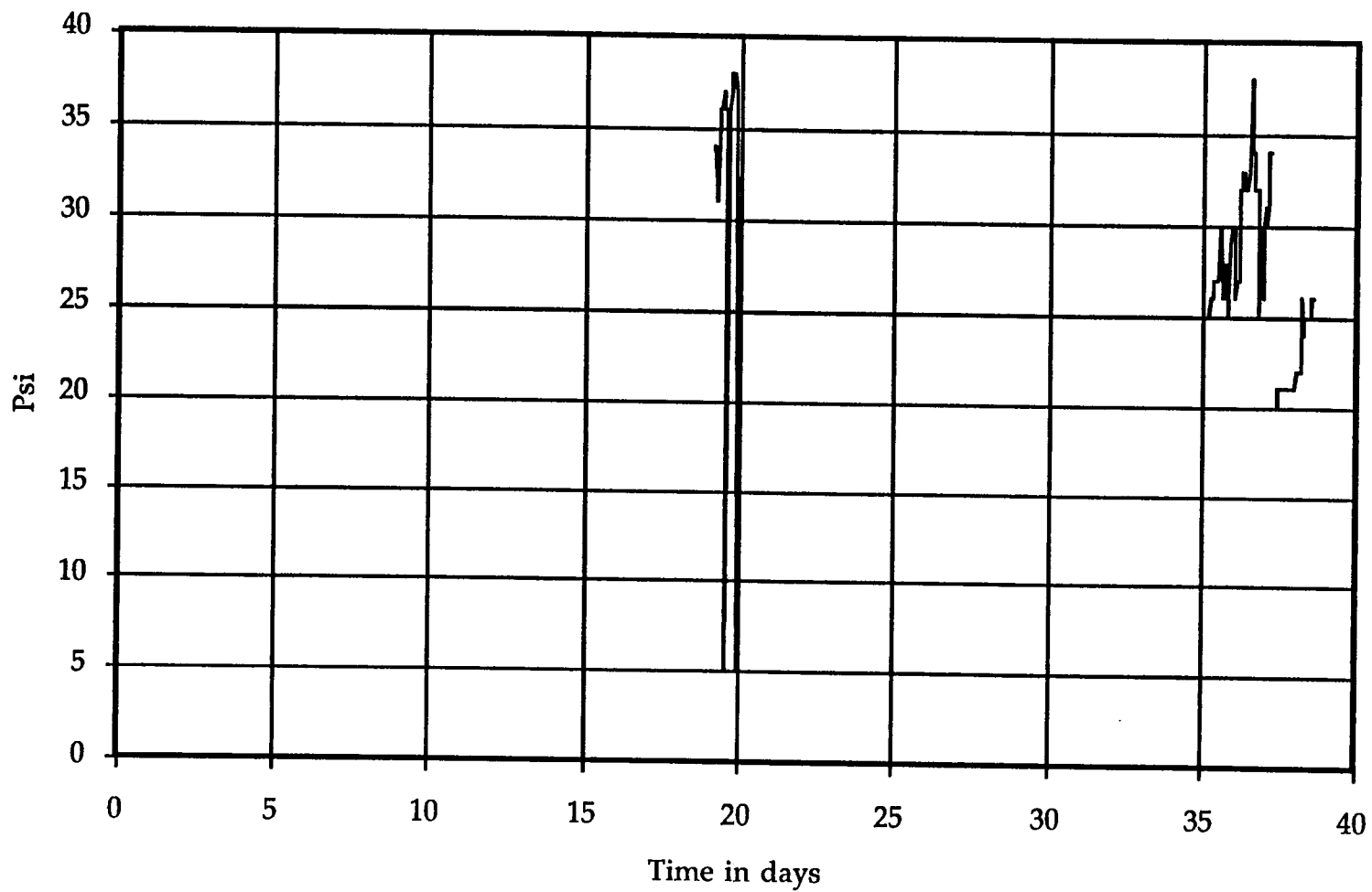
Dynamic Underground Stripping Project
Cumulative water injected and extracted at the gas
pad during the second steam injection pass



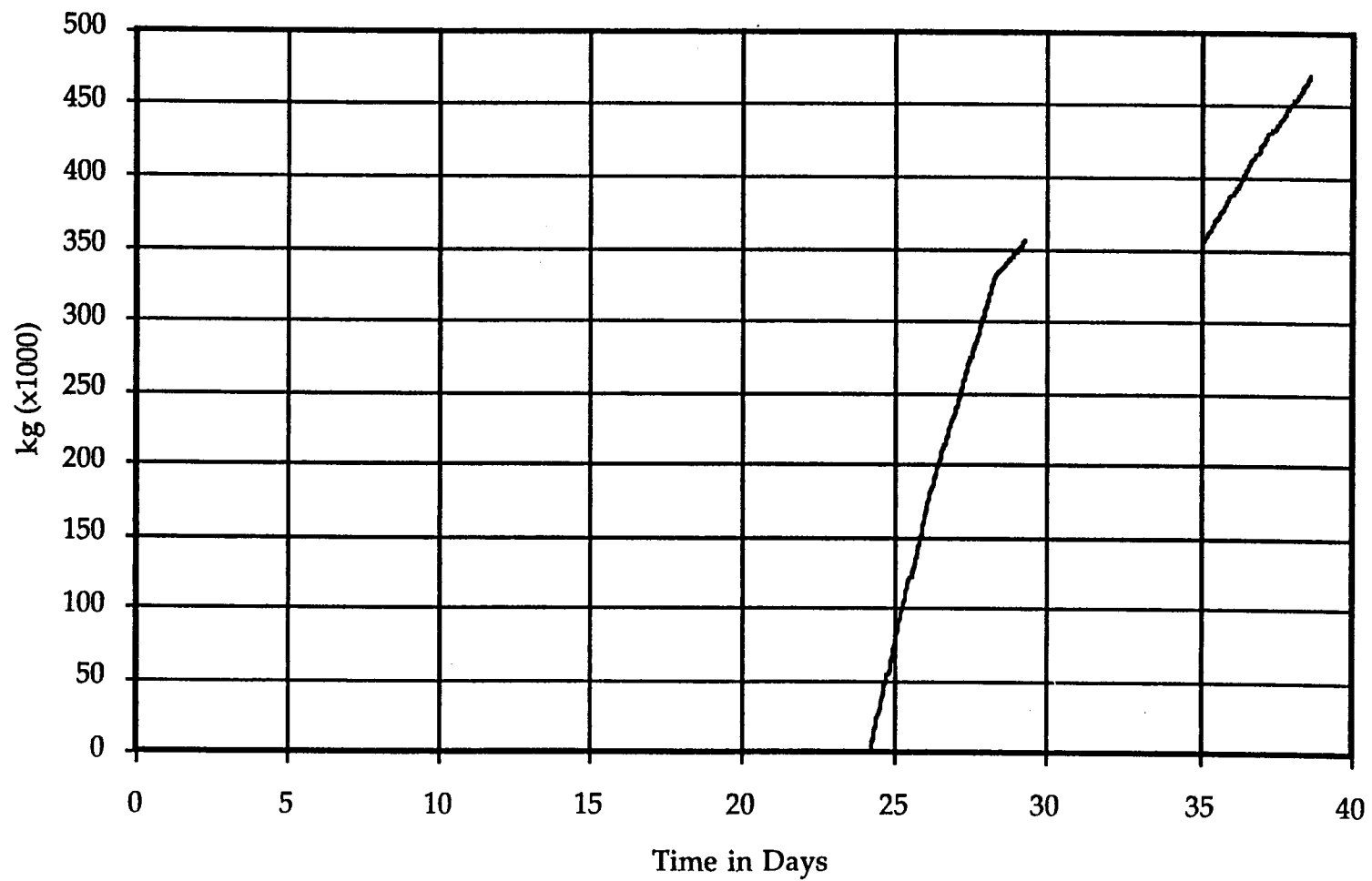
Dynamic Underground Stripping Project
Cumulative steam flow into the upper screened
interval of injection well GIW-813 during the second pass



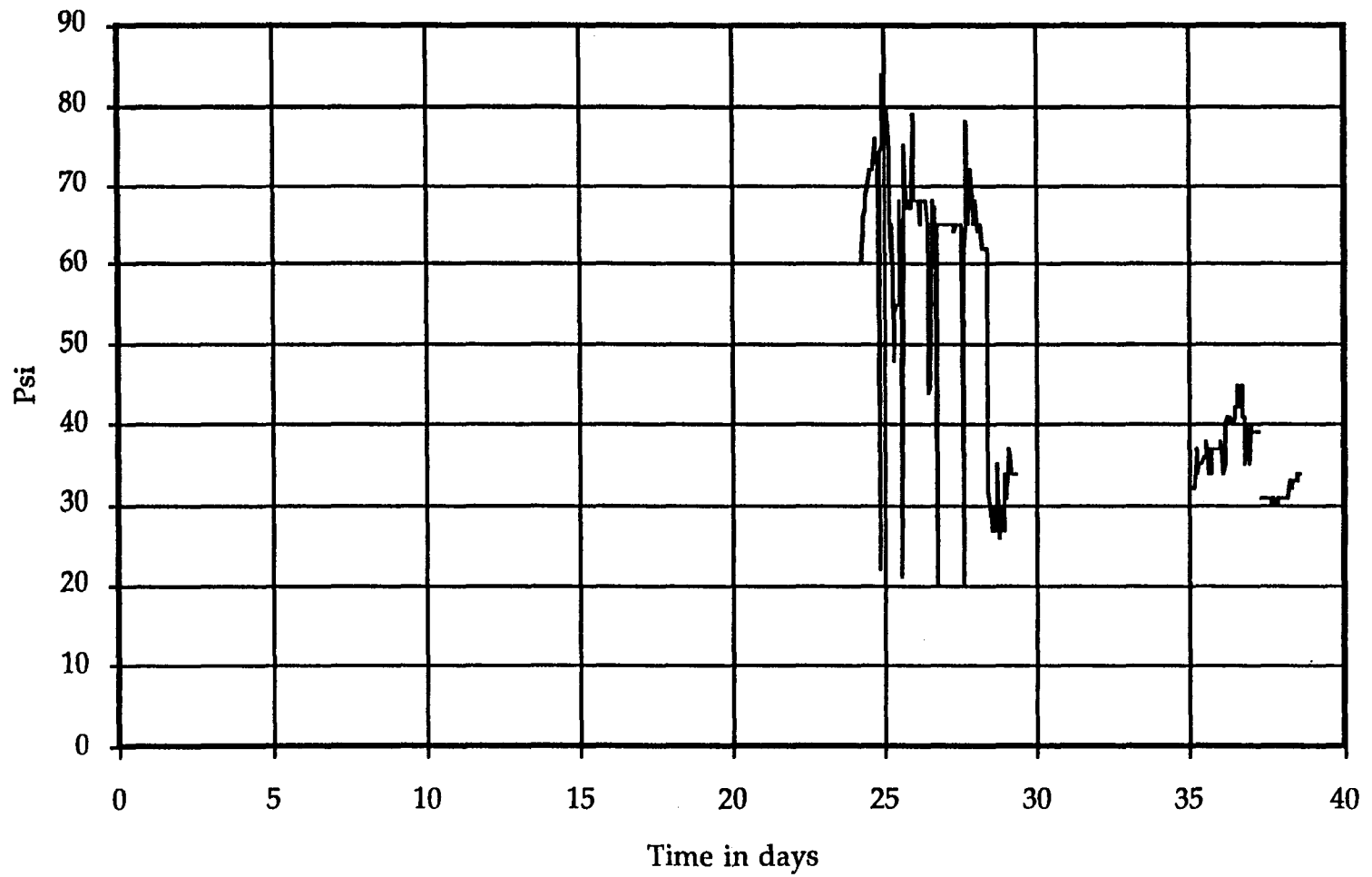
Dynamic Underground Stripping Project
Steam injection pressure into the upper screened
interval of GIW-813 during the second steam injection pass



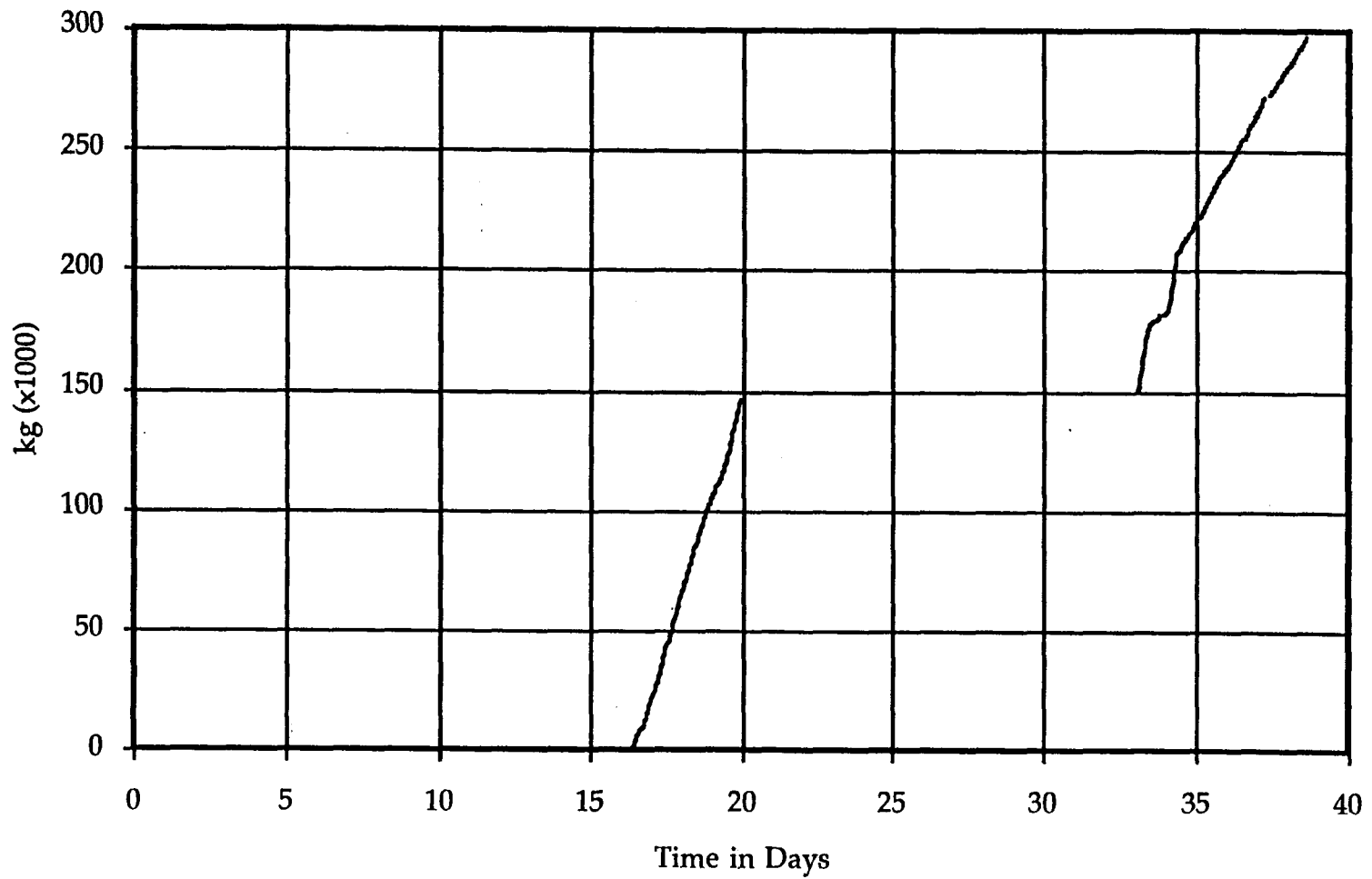
Dynamic Underground Stripping Project
Cumulative steam flow into the lower screened
interval of injection well GIW-813 during the second pass



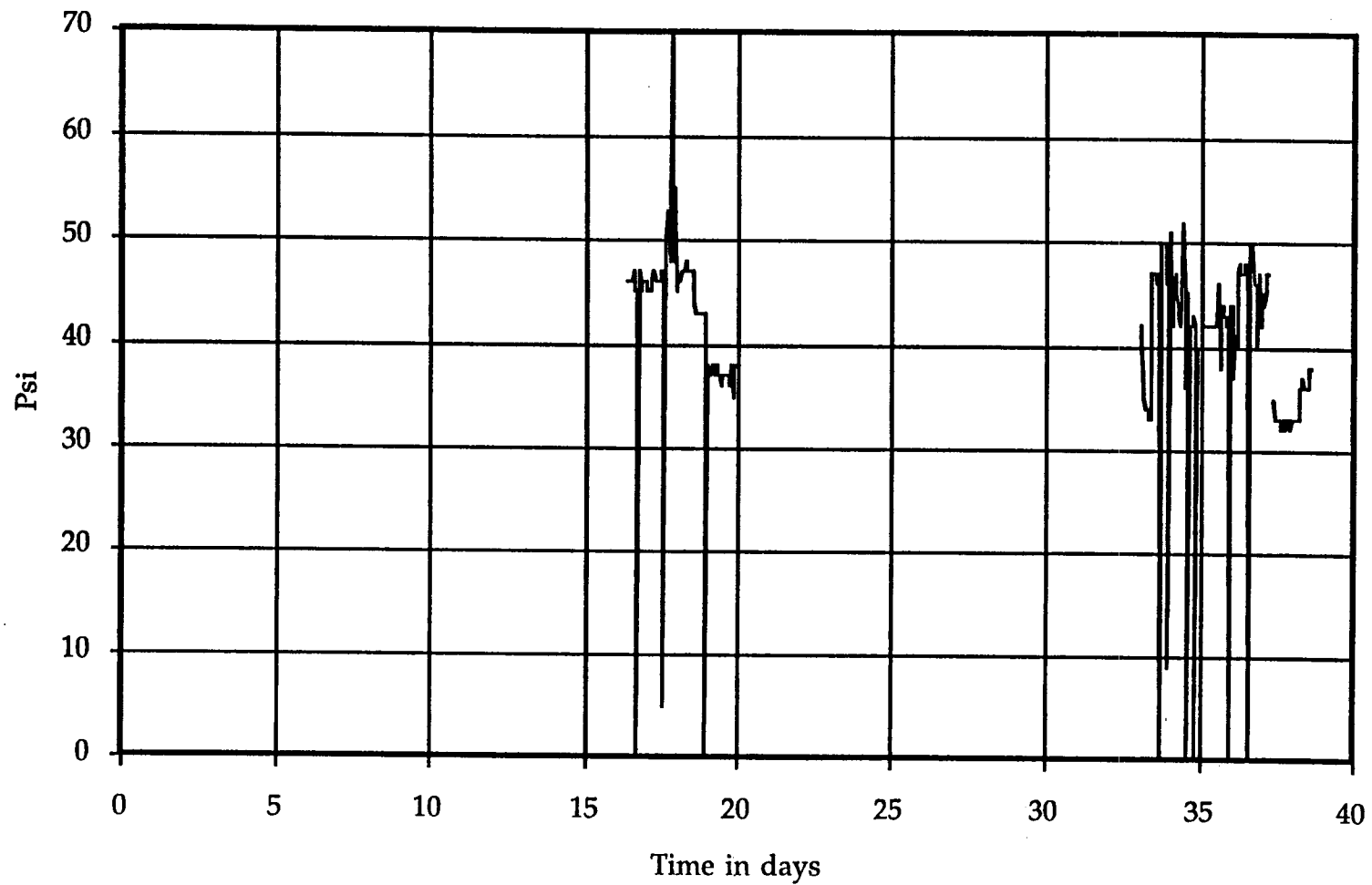
Dynamic Underground Stripping Project
Steam injection pressure into the lower screened
interval of GIW-813 during the second steam injection pass



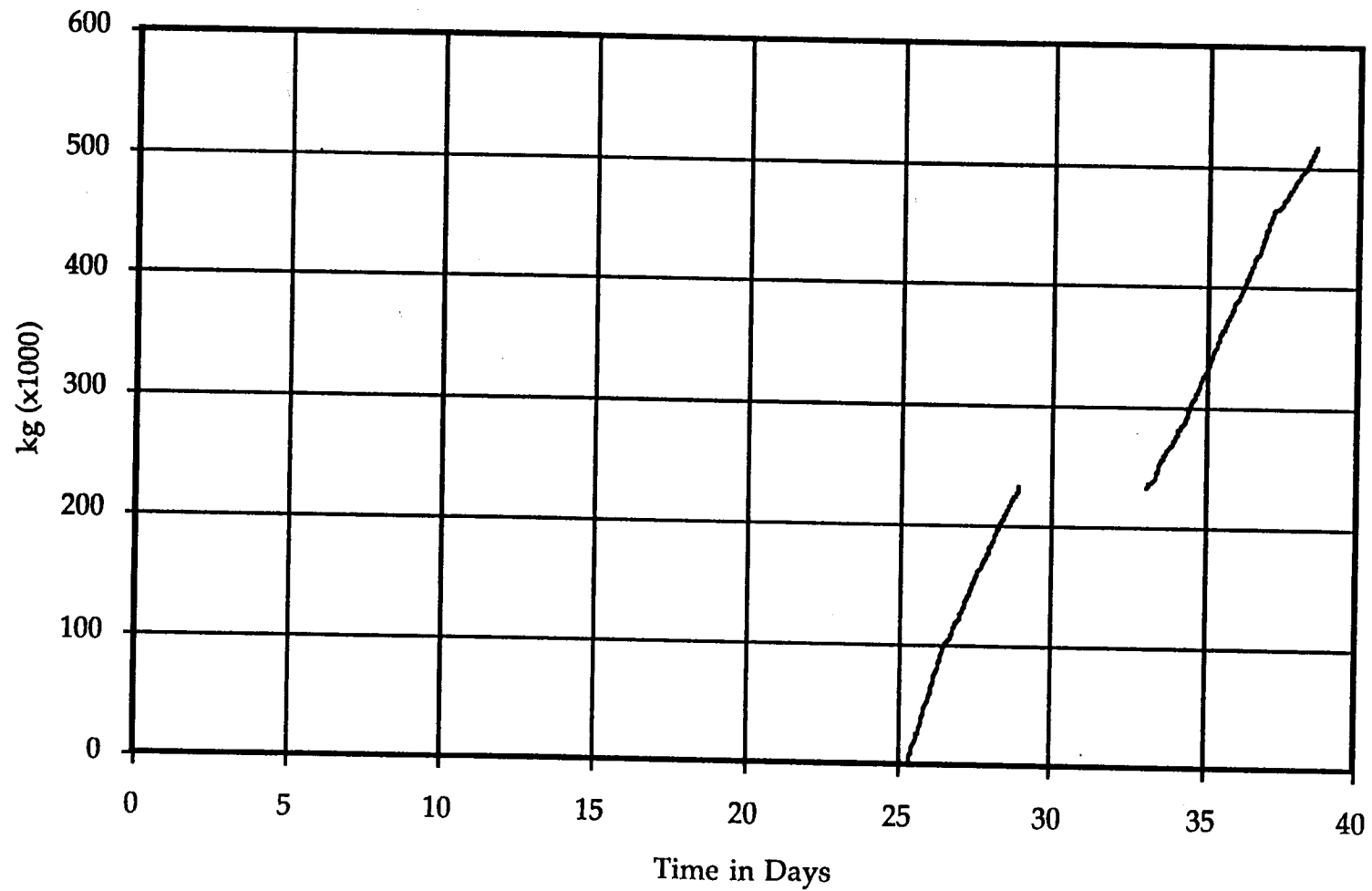
Dynamic Underground Stripping Project
Cumulative steam flow into the upper screened
interval of injection well GIW-814 during the second pass



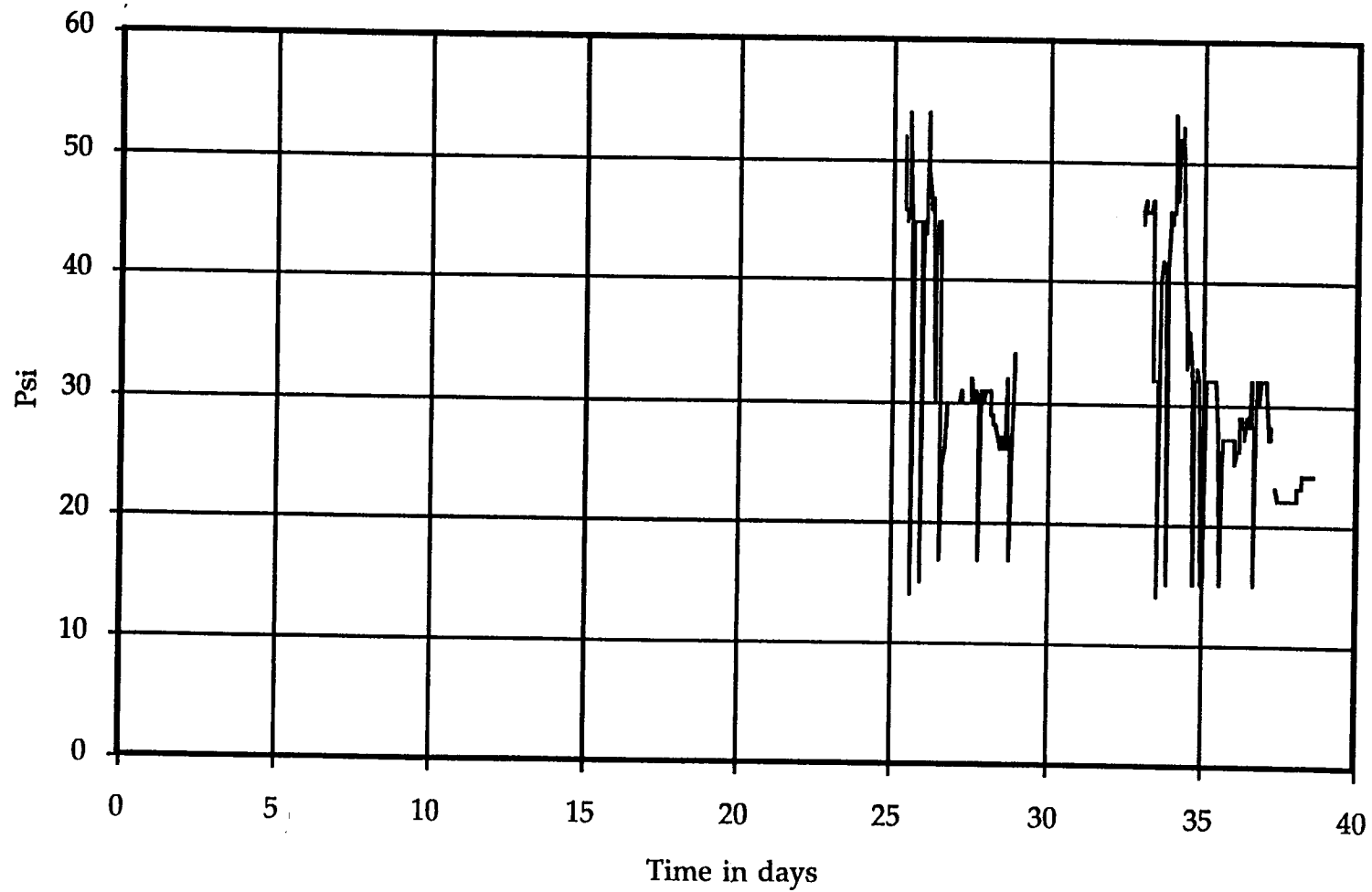
Dynamic Underground Stripping Project
Steam injection pressure into the upper screened
interval of GIW-814 during the second steam injection pass



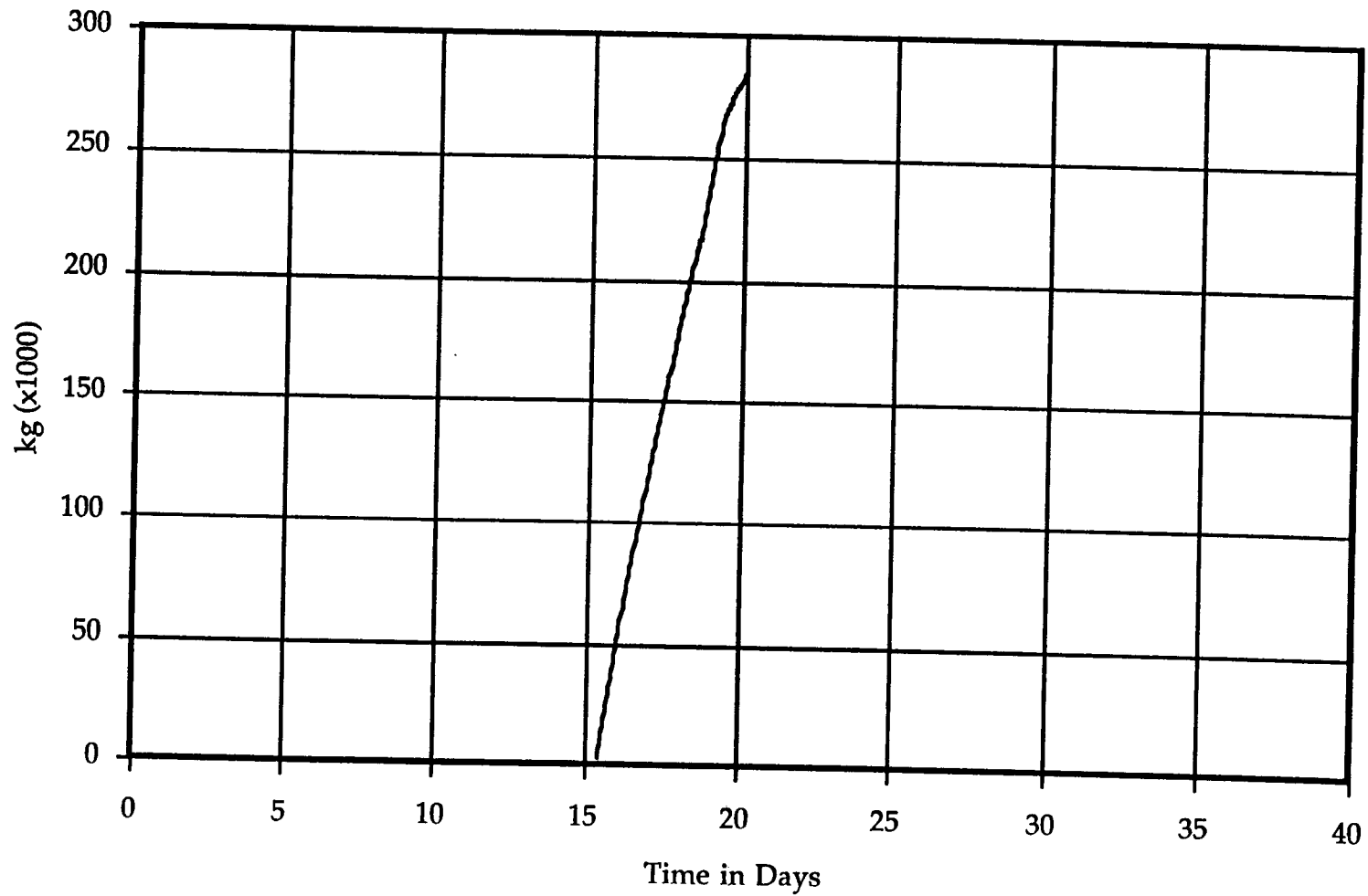
Dynamic Underground Stripping Project
Cumulative steam flow into the lower screened
interval of injection well GIW-814 during the second pass



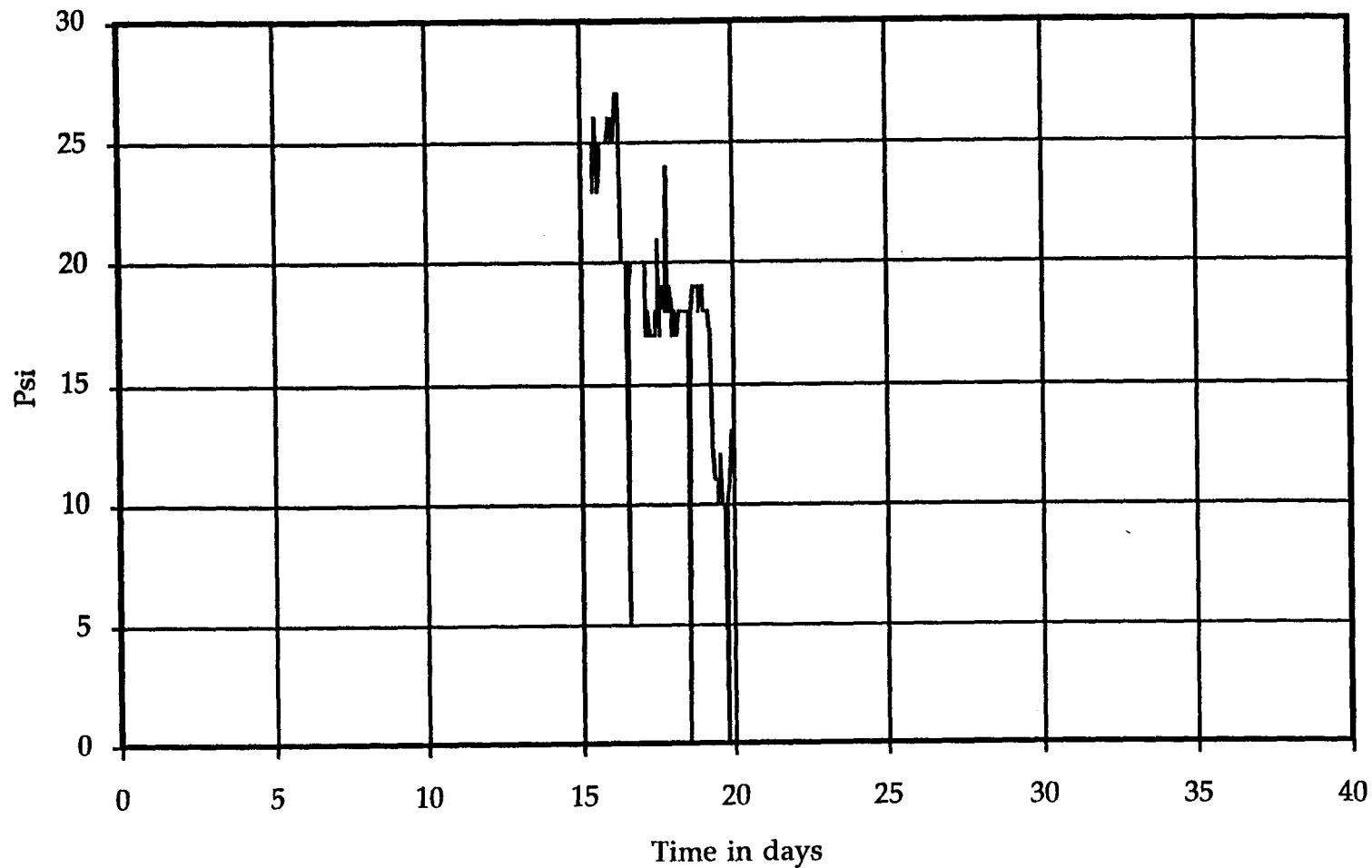
Dynamic Underground Stripping Project
Steam injection pressure into the lower screened
interval of GIW-814 during the second steam injection pass



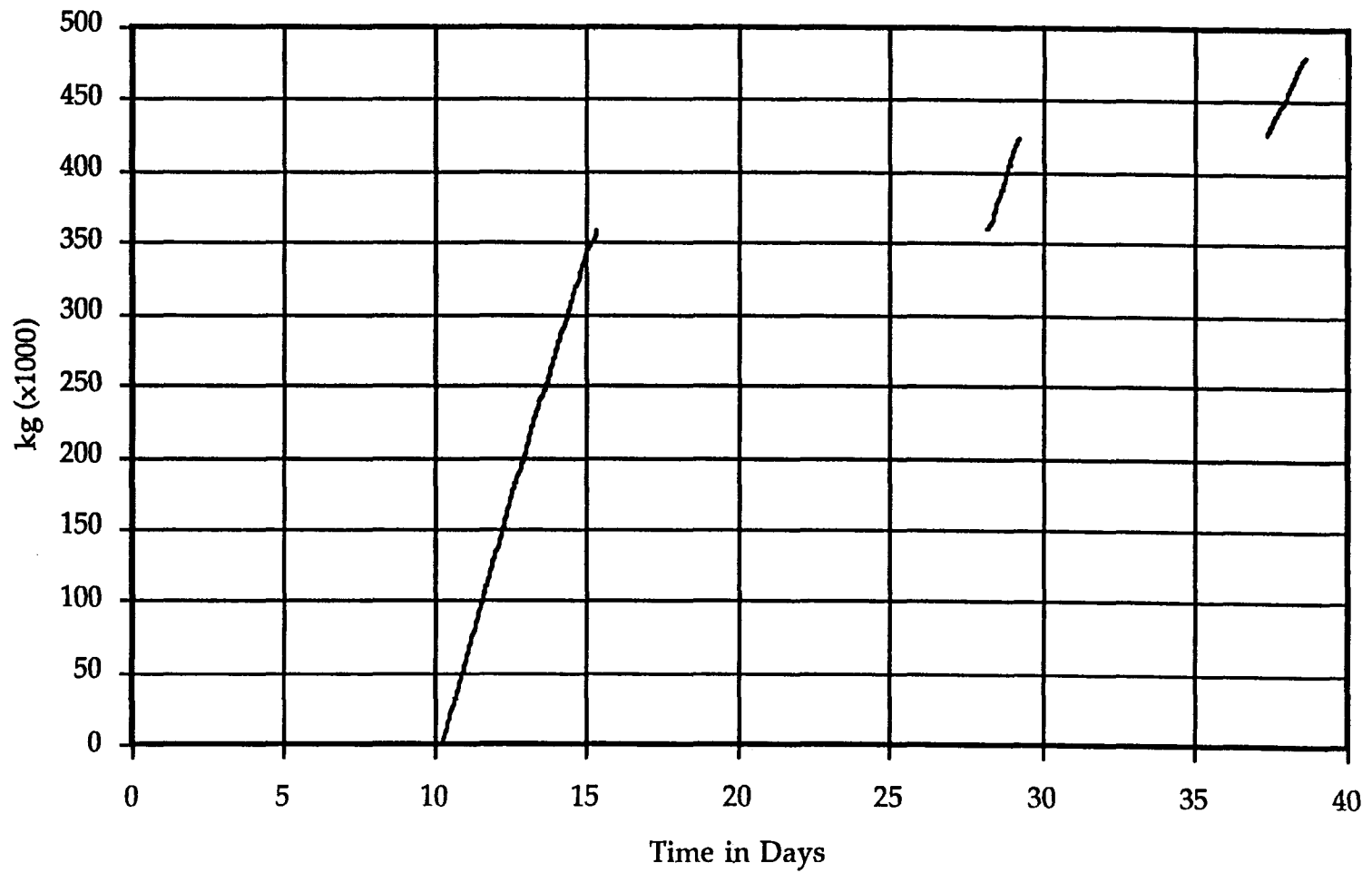
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Cumulative steam flow into the upper screened
interval of injection well GIW-815 during the second pass



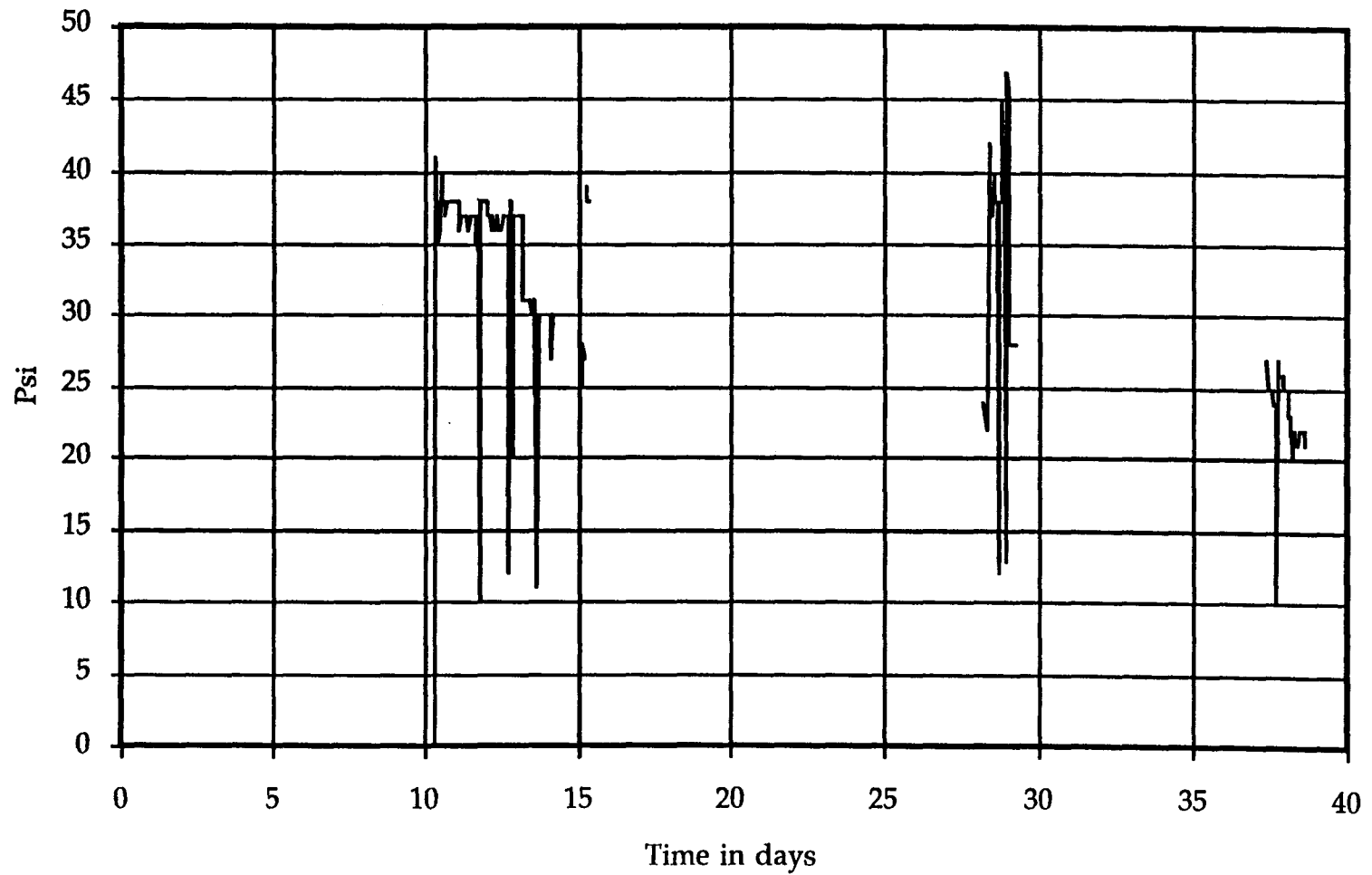
Dynamic Underground Stripping Project
Steam injection pressure into the upper screened
interval of GIW-815 during the second steam injection pass



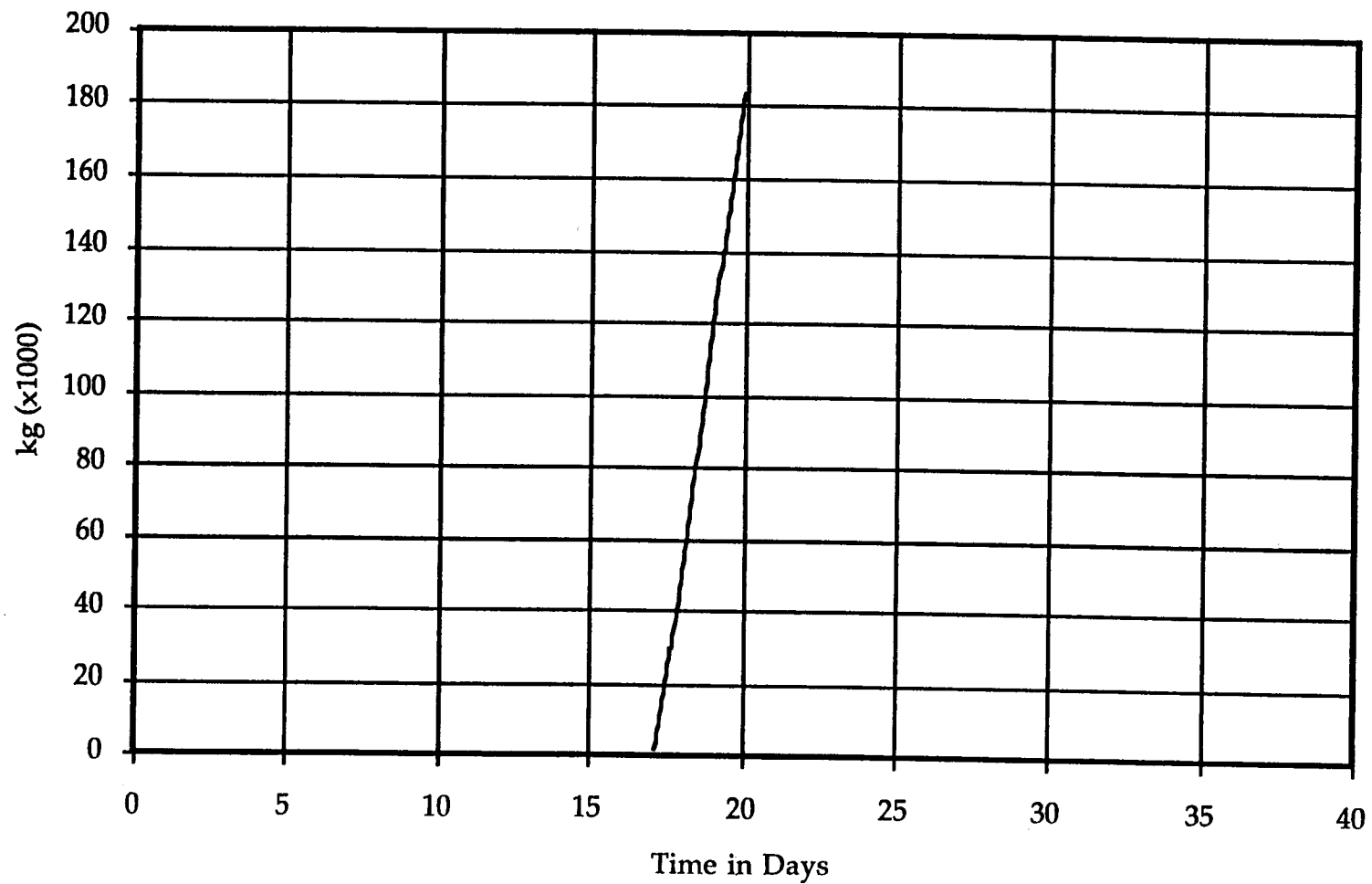
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Cumulative steam flow into the lower screened
interval of injection well GIW-815 during the second pass



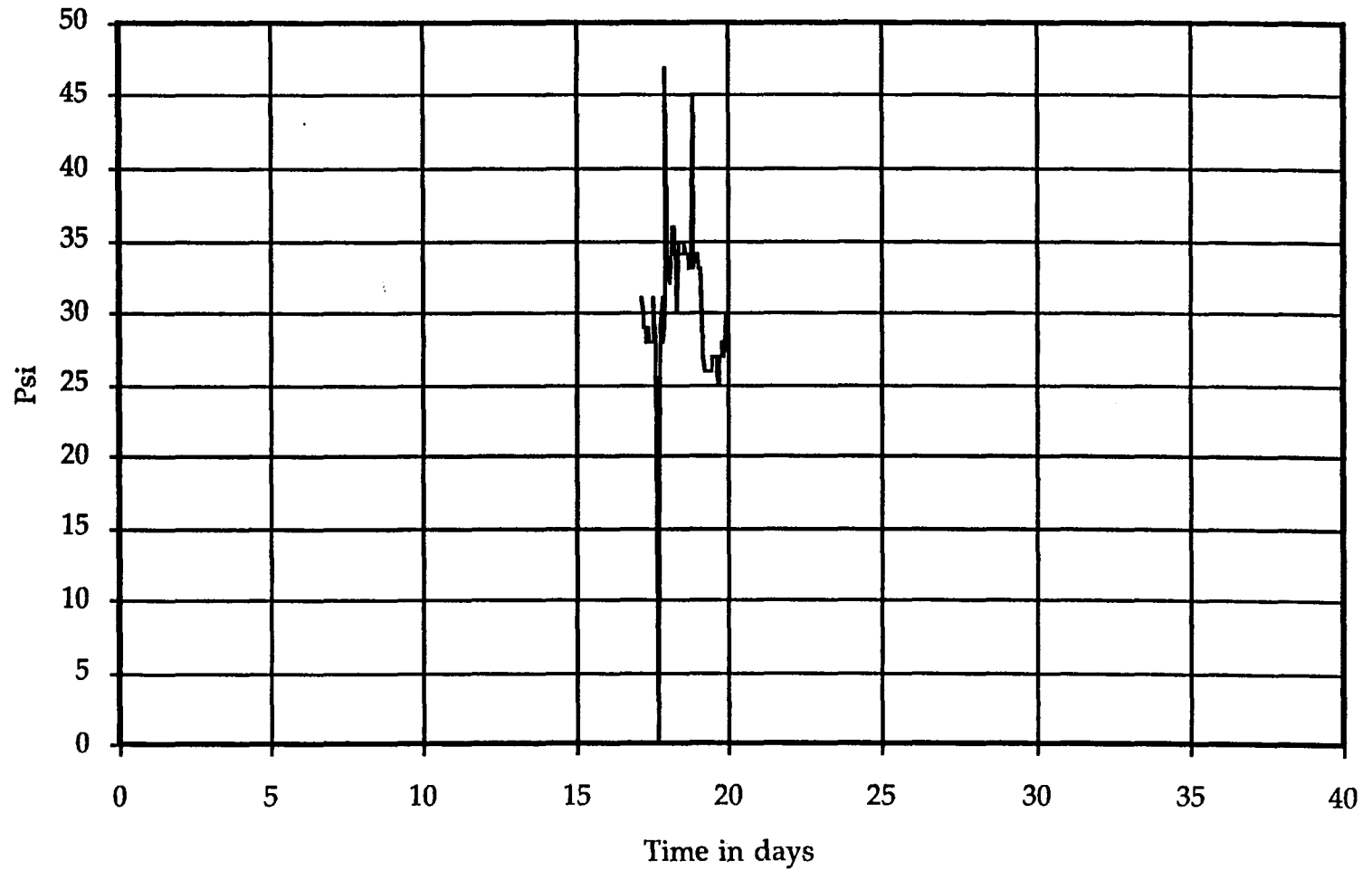
Dynamic Underground Stripping Project
Steam injection pressure into the lower screened
interval of GIW-815 during the second steam injection pass



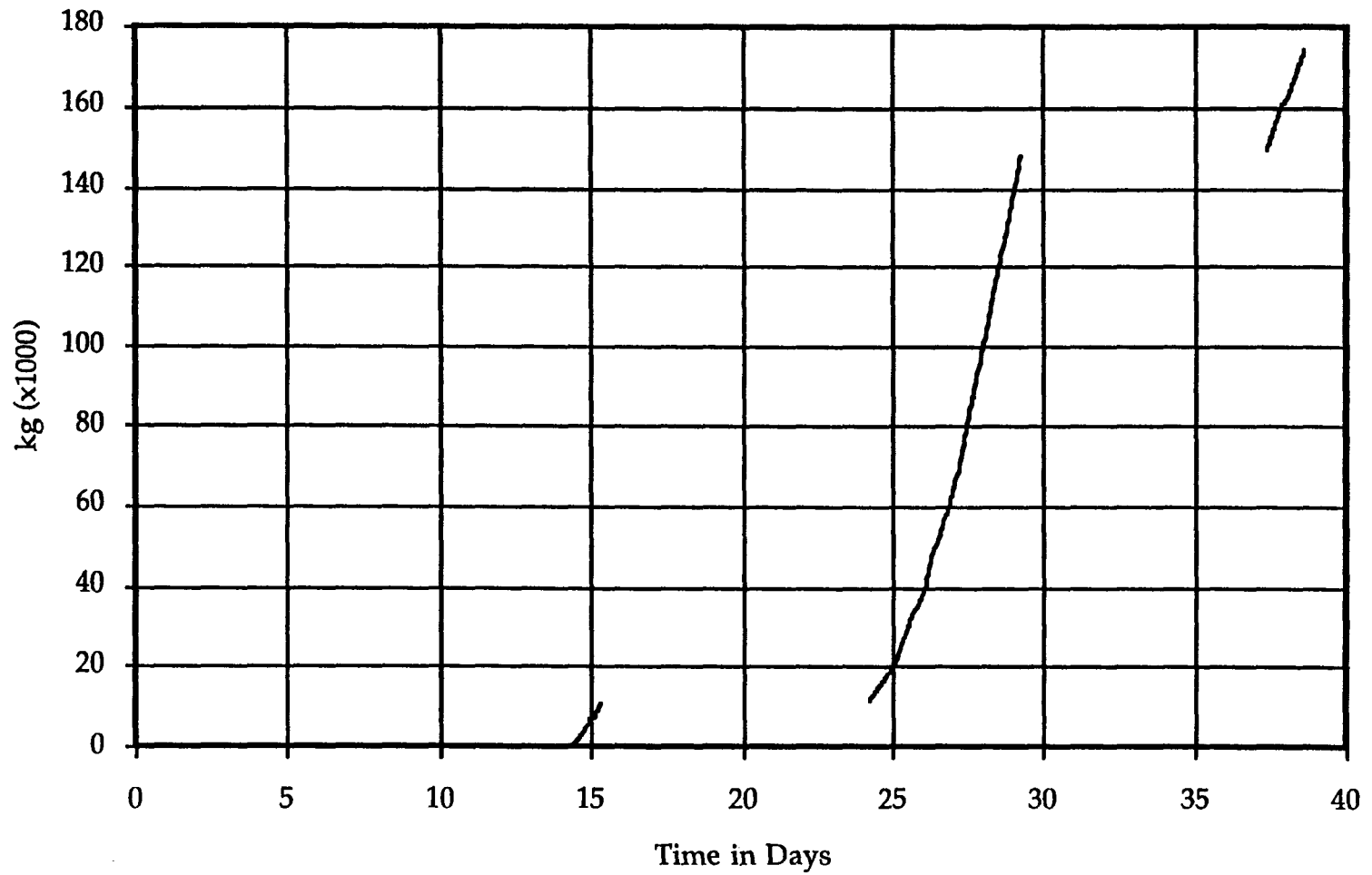
Dynamic Underground Stripping Project
Cumulative steam flow into the upper screened
interval of injection well GIW-818 during the second pass



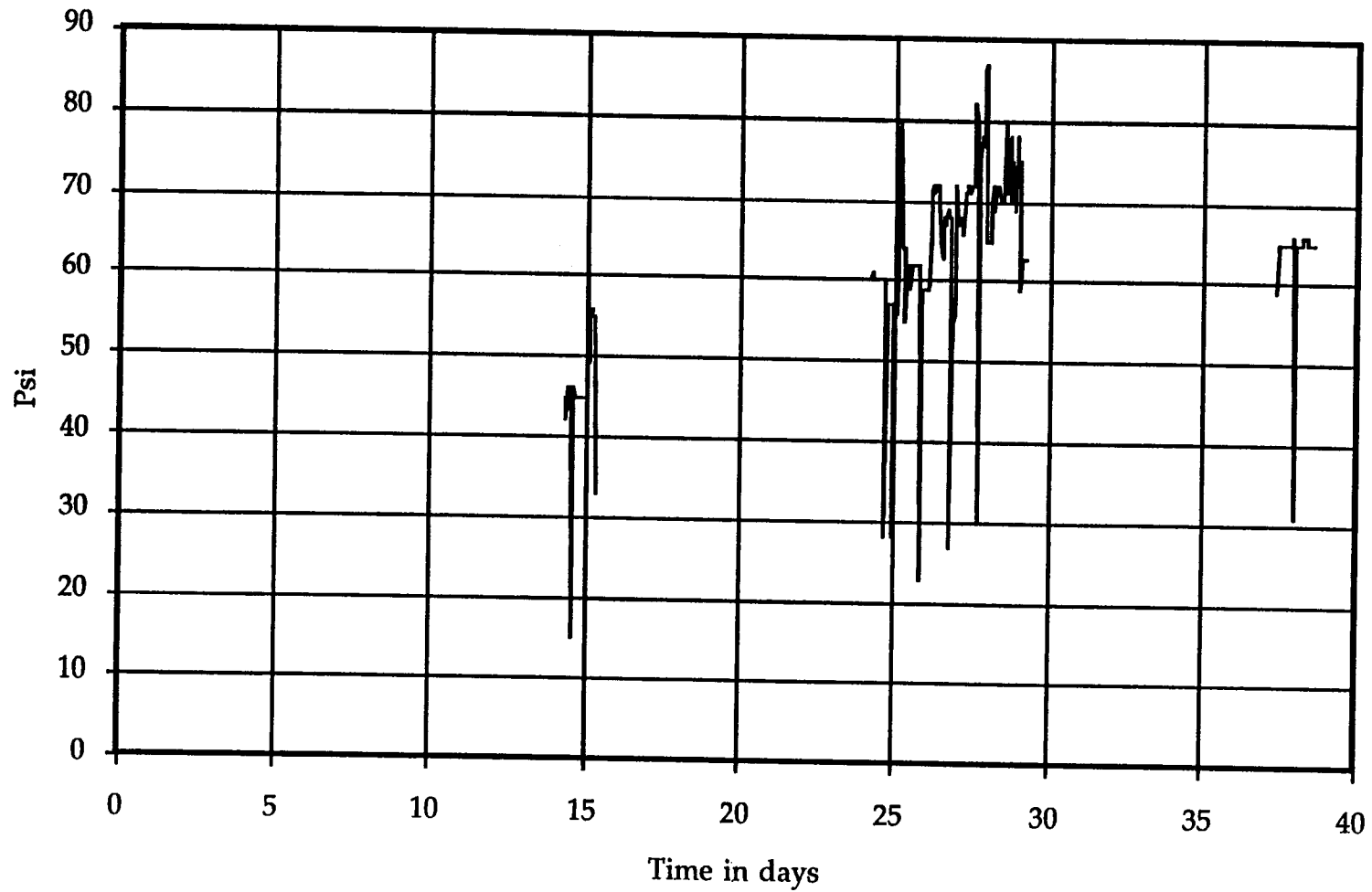
Dynamic Underground Stripping Project
Steam injection pressure into the upper screened
interval of GIW-818 during the second steam injection pass



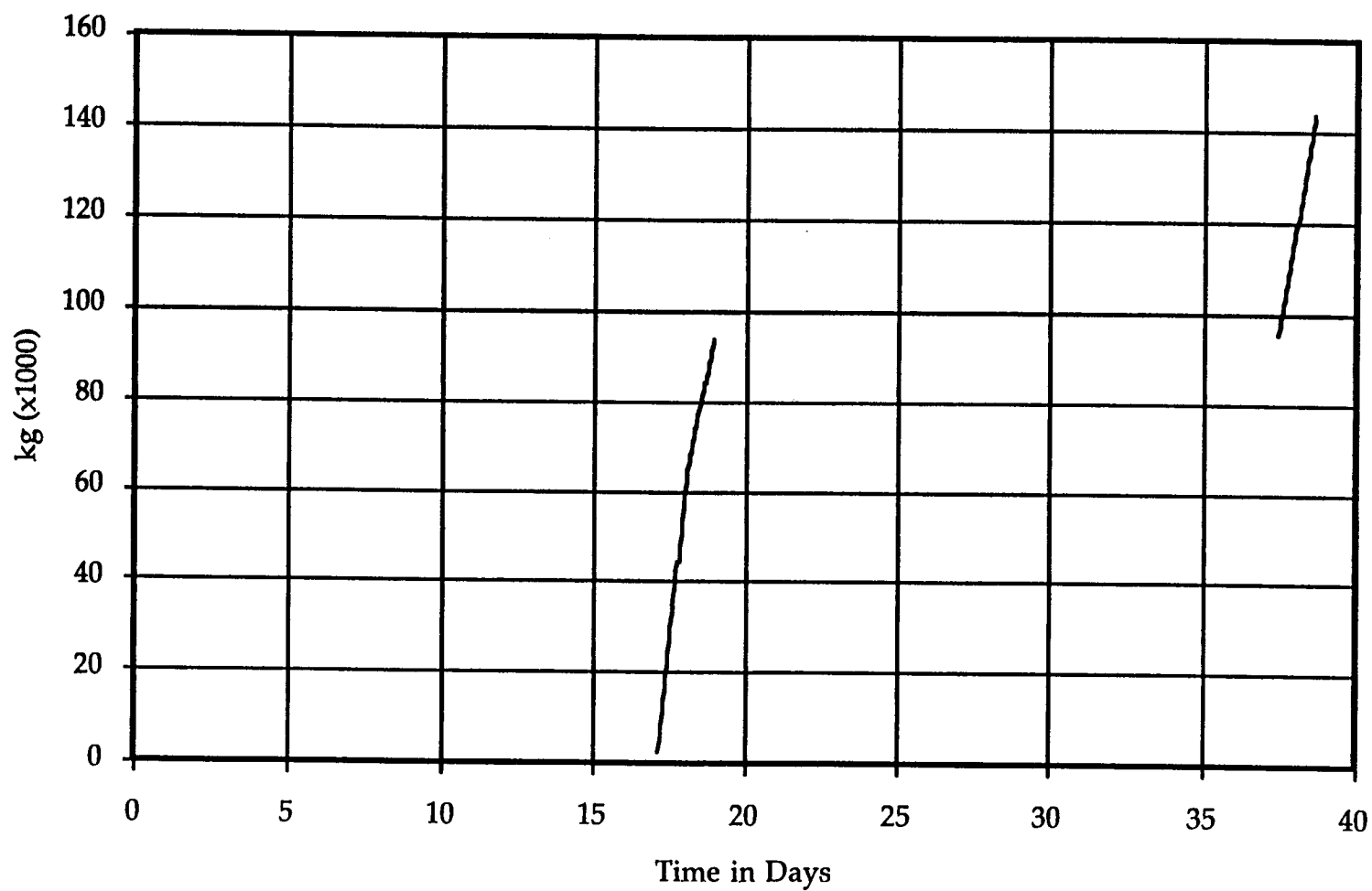
Dynamic Underground Stripping Project
Cumulative steam flow into the lower screened
interval of injection well GIW-818 during the second pass



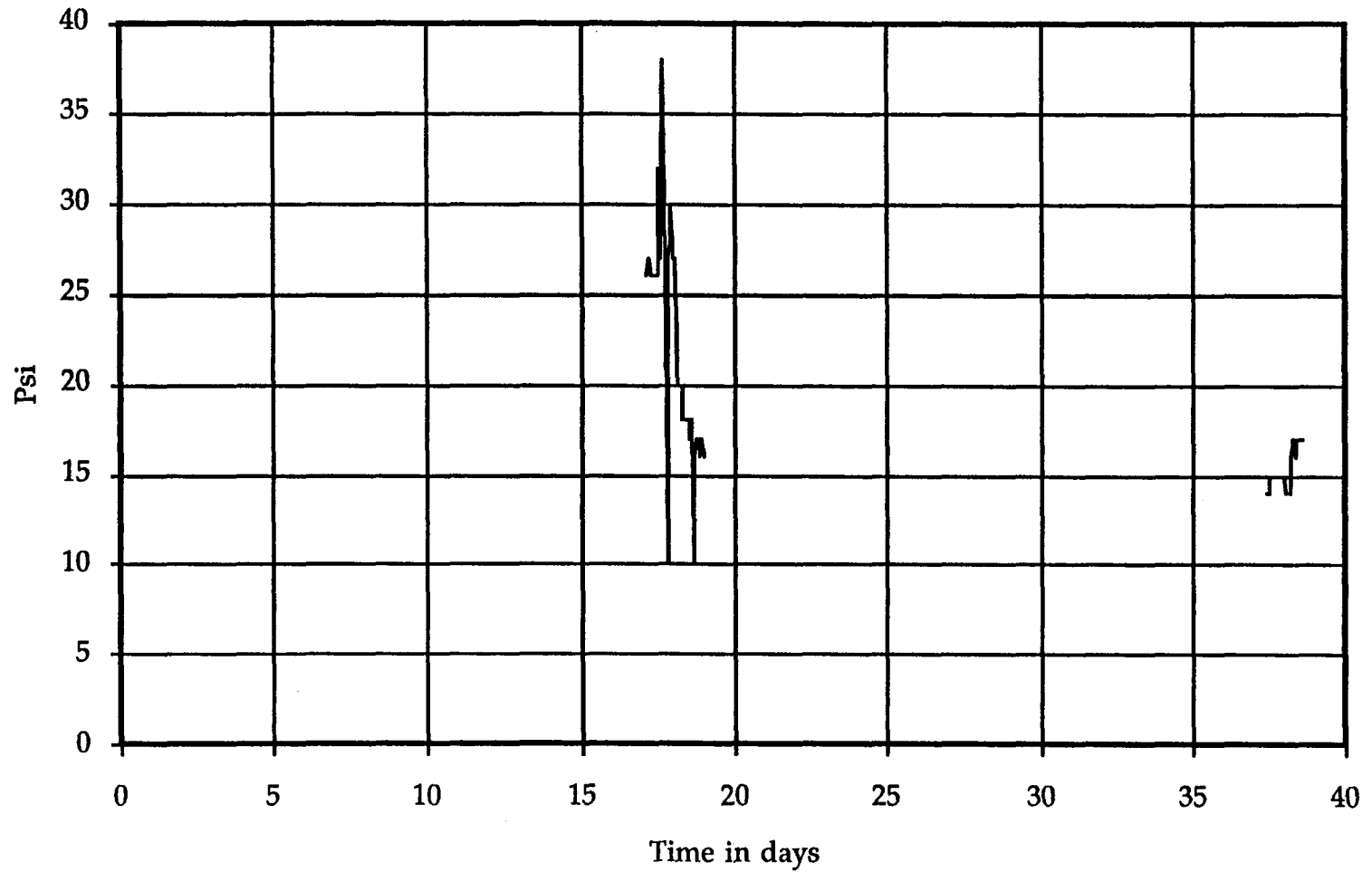
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Steam injection pressure into the lower screened
interval of GIW-818 during the second steam injection pass



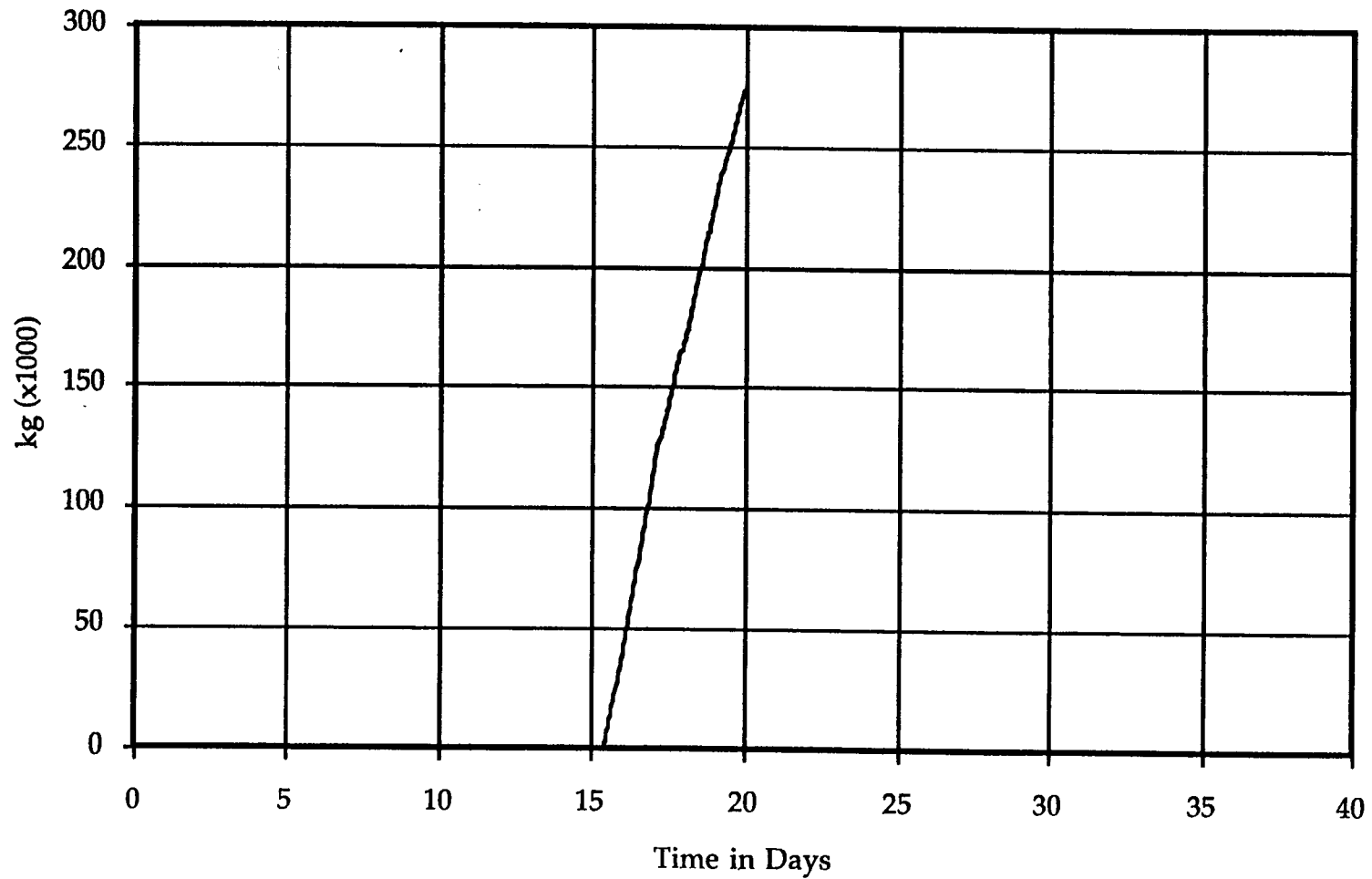
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Cumulative steam flow into the upper screened
interval of injection well GIW-819 during the second pass



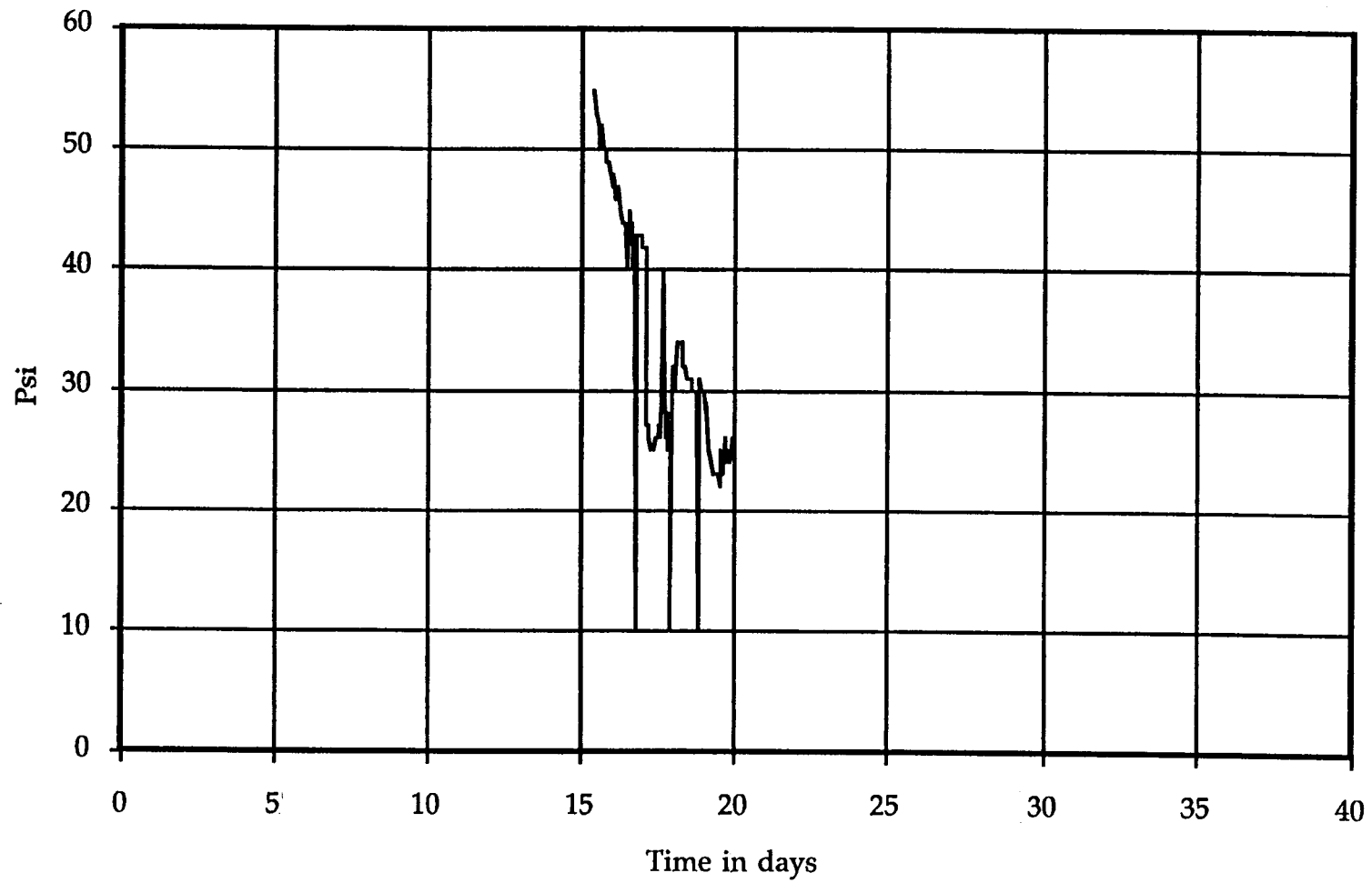
Dynamic Underground Stripping Project
Steam injection pressure into the upper screened
interval of GIW-819 during the second steam injection pass



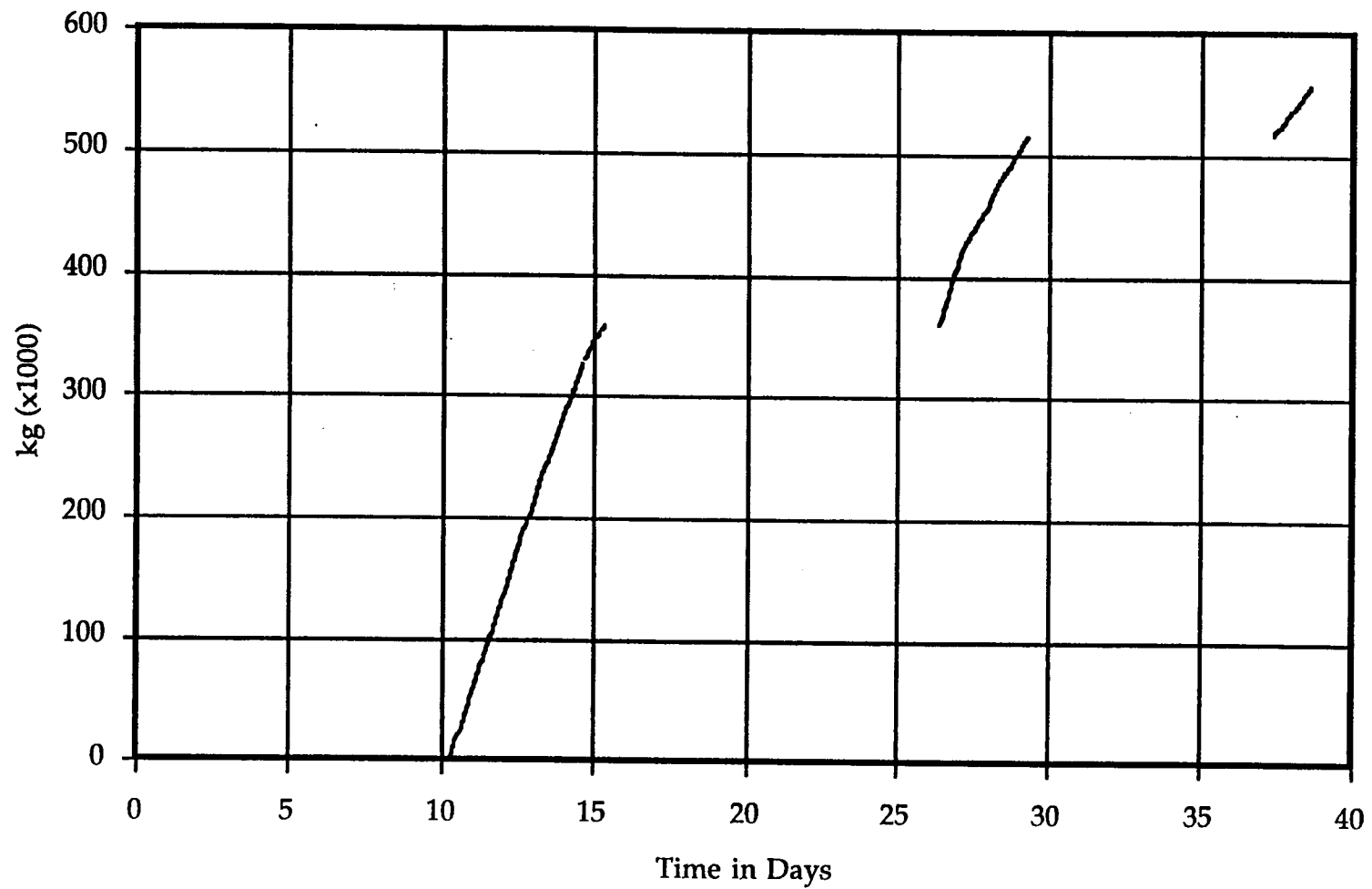
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Cumulative steam flow into the upper screened
interval of injection well GIW-820 during the second pass



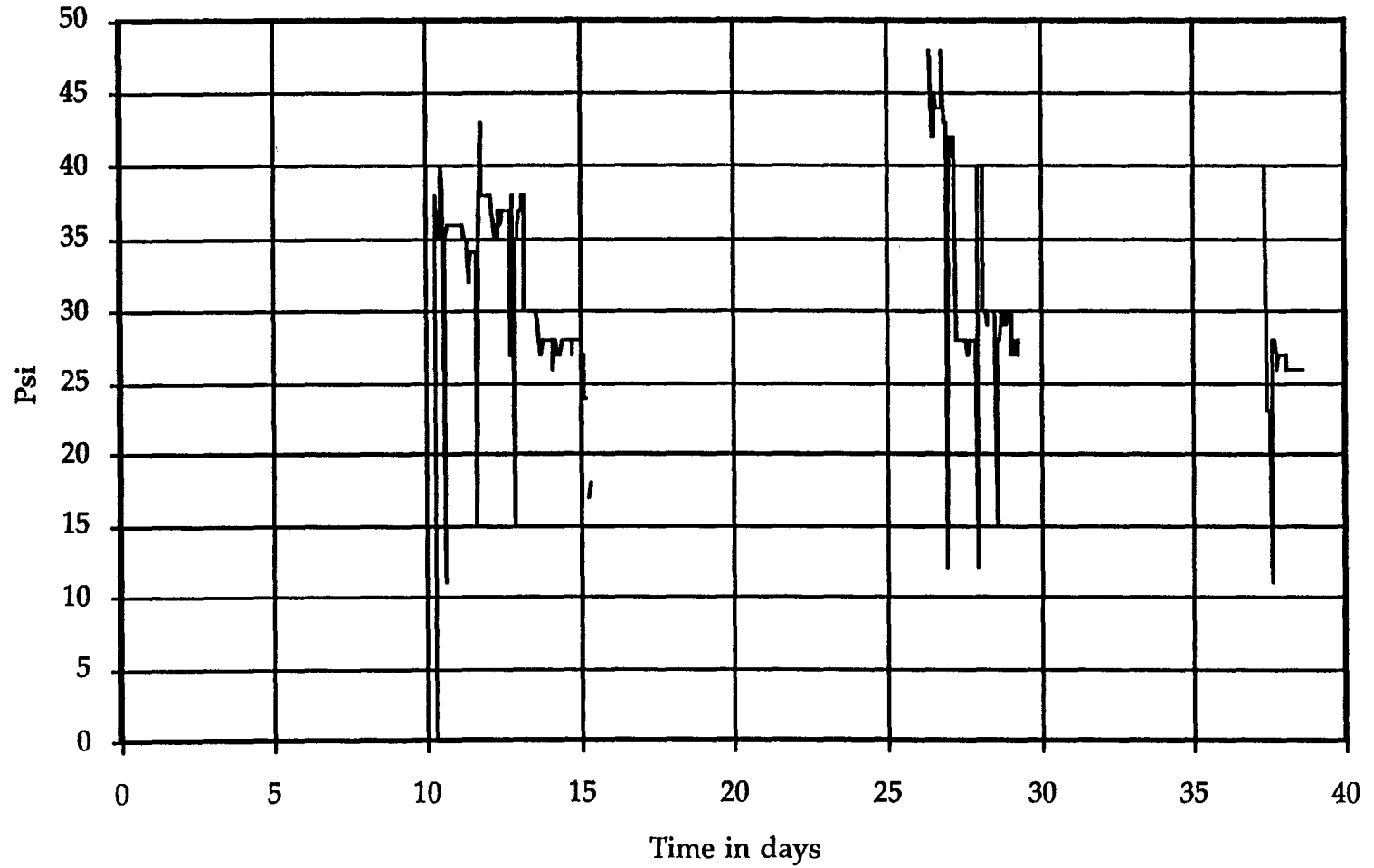
Dynamic Underground Stripping Project
Steam injection pressure into the upper screened
interval of GIW-820 during the second steam injection pass



Dynamic Underground Stripping Project
Cumulative steam flow into the lower screened
interval of injection well GIW-820 during the second pass

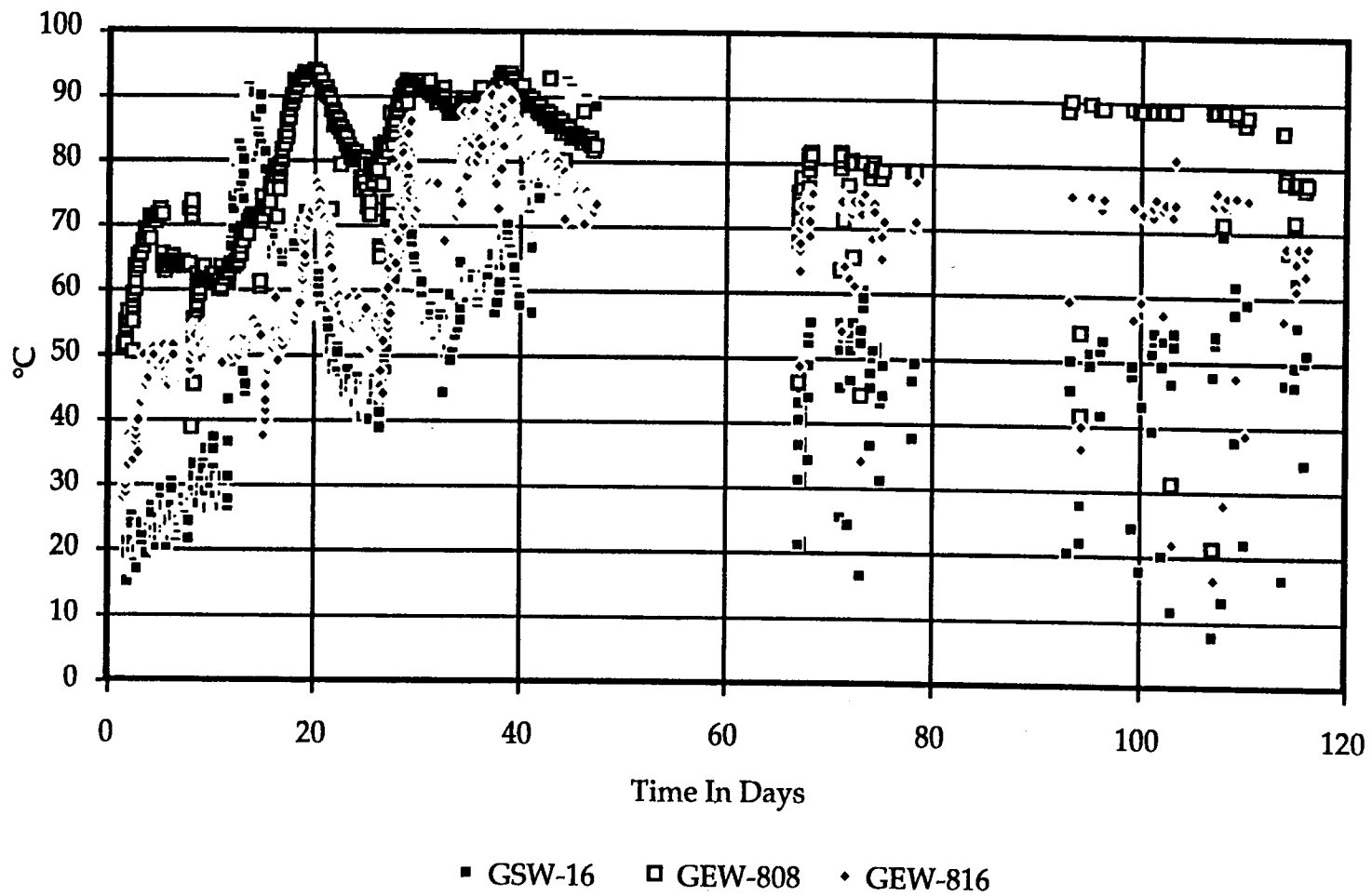


Dynamic Underground Stripping Project
Steam injection pressure into the lower screened
interval of GIW-820 during the second steam injection pass

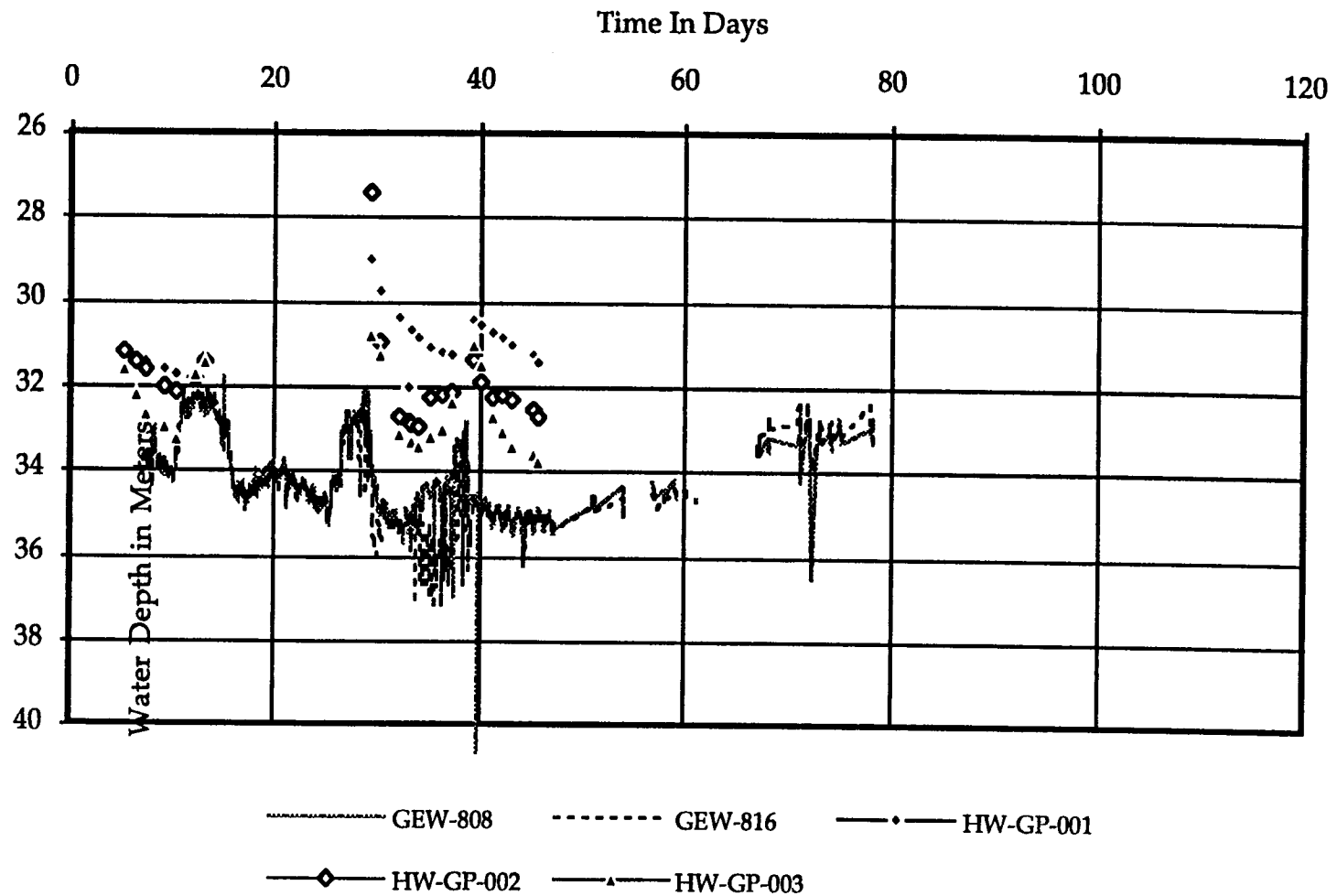


The following are plots of treatment and extraction facility operational data for the second pass of steam injection. Steam was injected intermittently for a total of 22 days beginning on June 2, 1993 and ending on June 30, 1993. During the second pass, the boiler was operated in a "huff and puff" mode. Steam was injected for four to five days and then shut off for another three to five days until a total of 20 days of boiler operating time was achieved. Extraction of vapor and liquid from the extraction wells continued uninterrupted whether the boiler was operational or not.

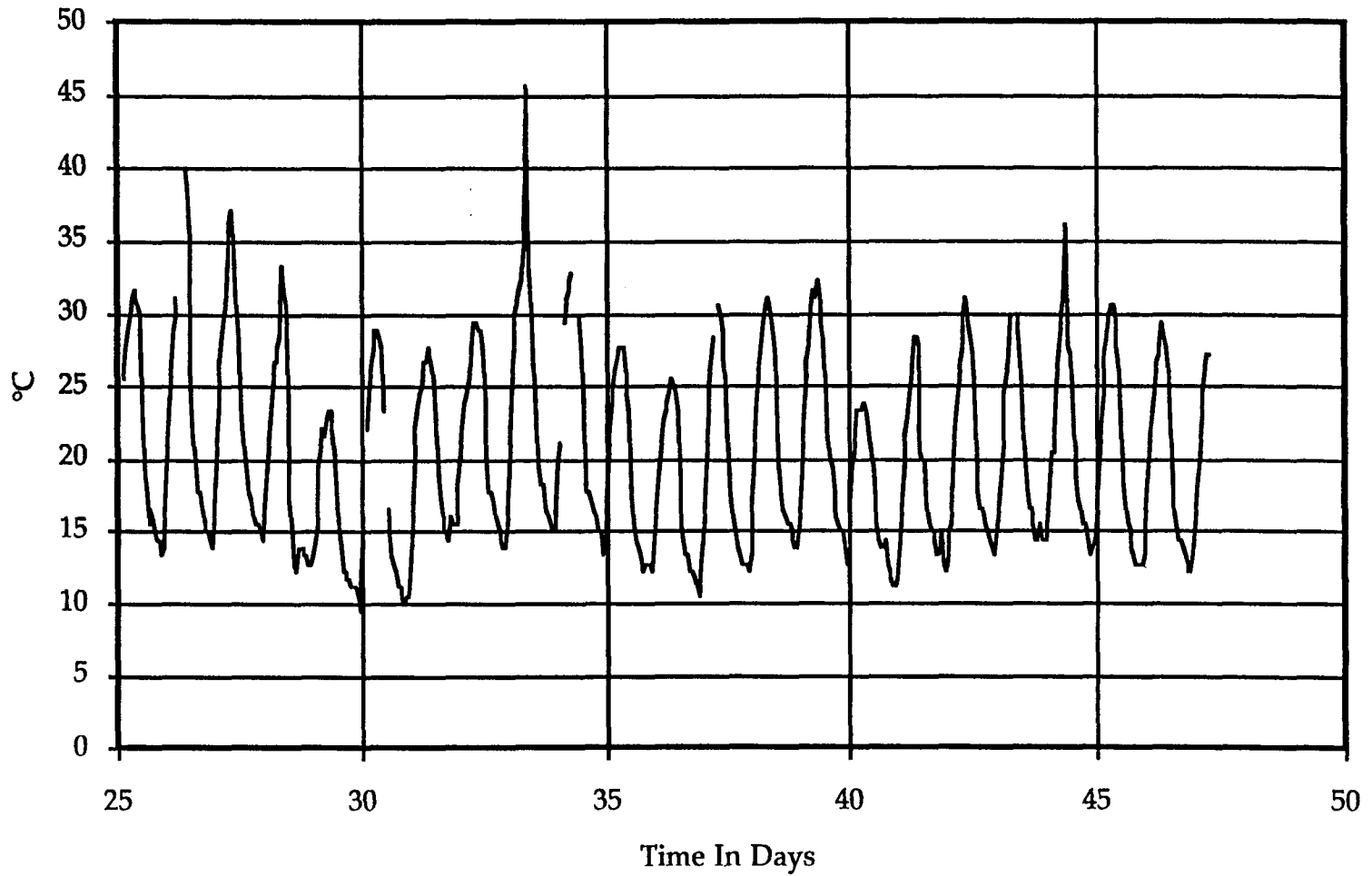
Dynamic Underground Stripping Project
Extraction well vapor temperatures at the gas pad
during and after the second steam injection pass



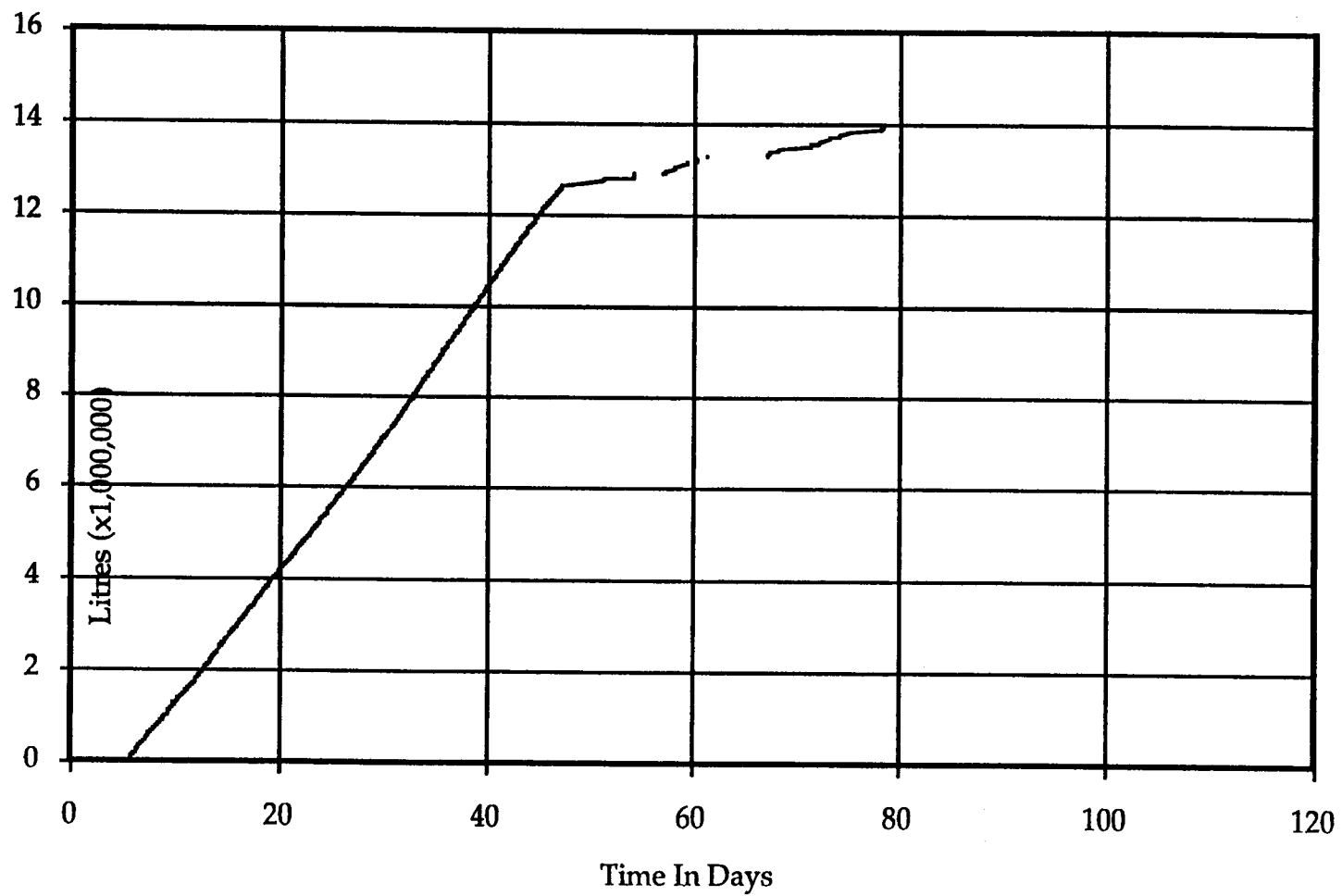
Dynamic Underground Stripping Project
Extraction well and heating well water levels
during and after the second steam injection pass



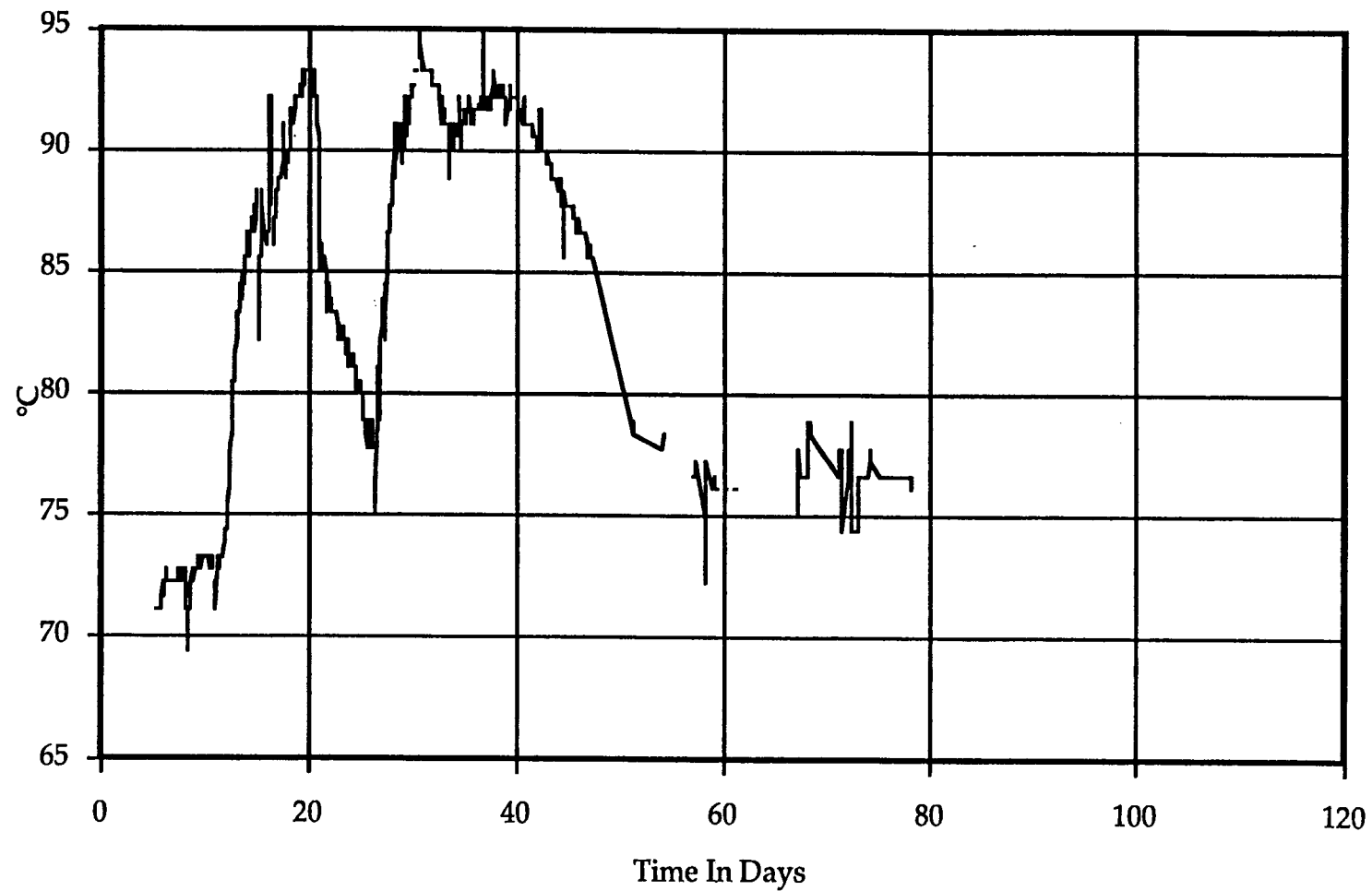
Dynamic Underground Stripping Project
Post condensor vapor temperature at the gas pad
during the second steam injection pass



Dynamic Underground Stripping Project
Cumulative groundwater extracted at the gas pad
during and after the second steam injection pass

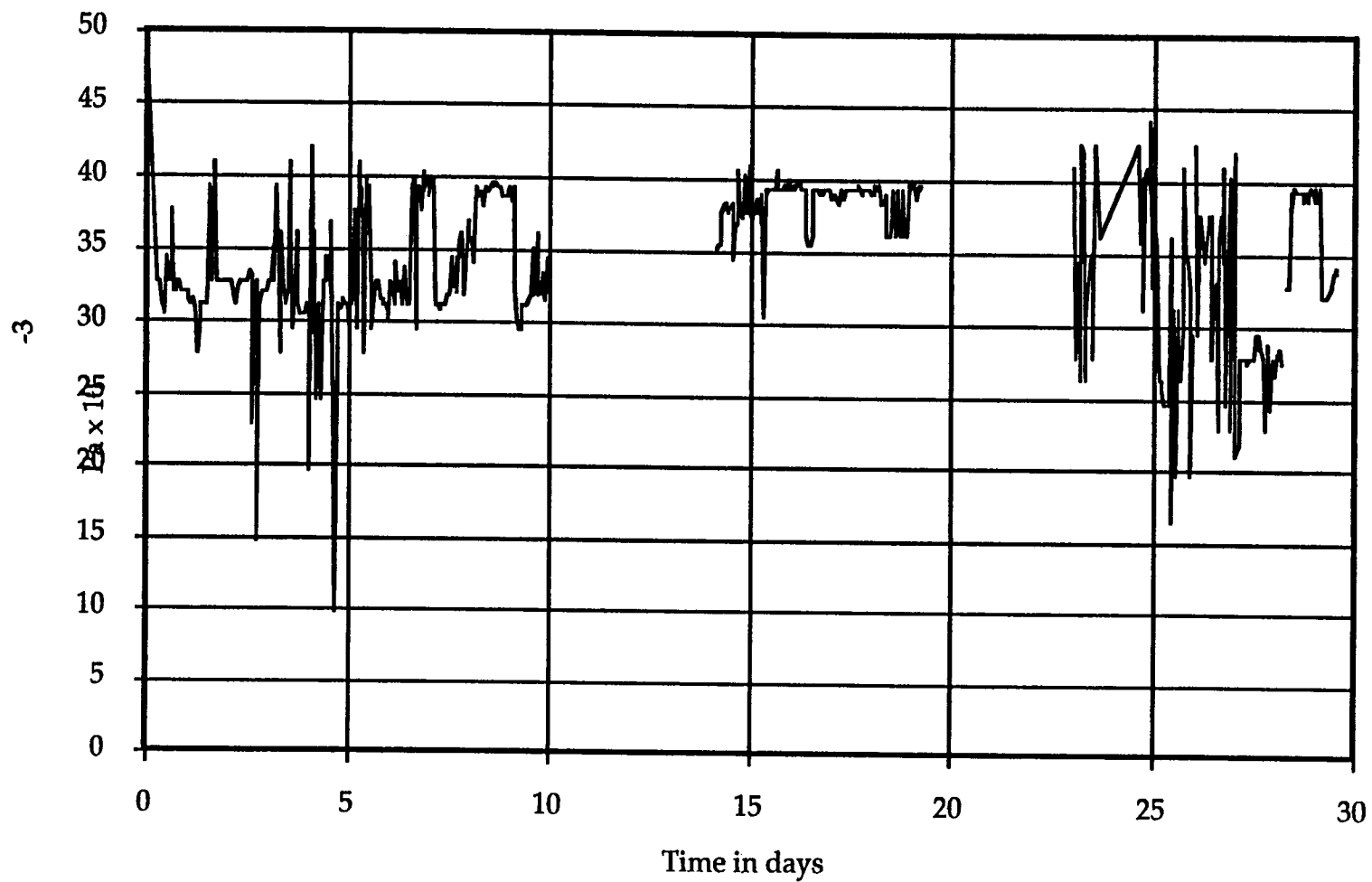


Dynamic Underground Stripping Project
Pumped groundwater temperature at the gas pad
during and after the second steam injection pass

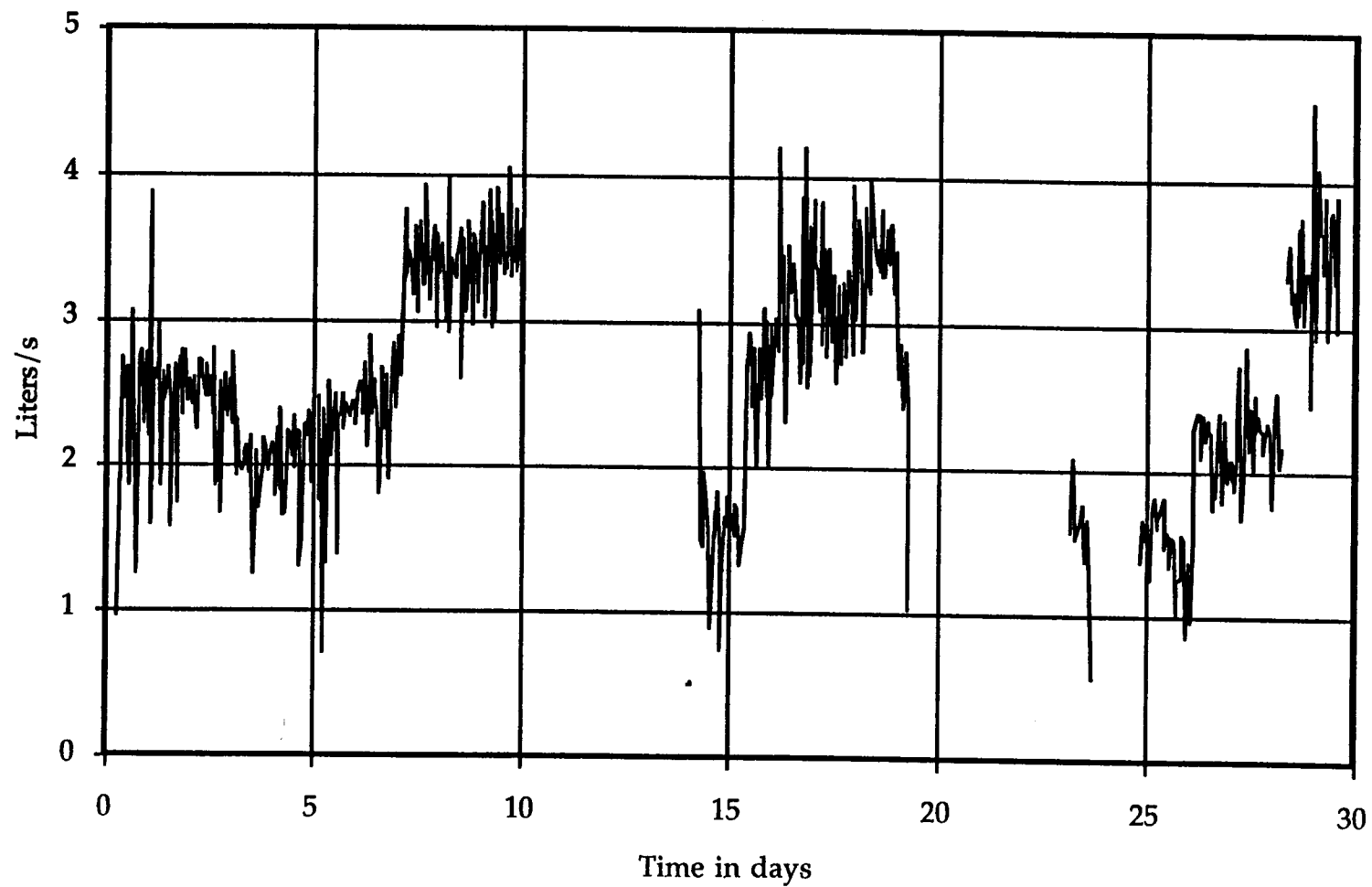


The following are plots of boiler operational data for the second pass of steam injection. Steam was injected intermittently for a total of 22 days beginning on June 2, 1993 and ending on June 30, 1993. During the second pass, the boiler was operated in a "huff and puff" mode. Steam was injected for four to five days and then shut off for another three to five days until a total of 20 days of boiler operating time was achieved. Extraction of vapor and liquid from the extraction wells continued uninterrupted whether the boiler was operational or not.

Dynamic Underground Stripping Project
Boiler operating pressure during
the second steam injection pass



Dynamic Underground Stripping Project
Average boiler water usage during
the second steam injection pass



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